

# DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

## Air Quality Control Commission

### REGULATION NUMBER 2

#### ODOR EMISSION

#### 5 CCR 1001-4

#### PART A GENERAL PROVISIONS

Pursuant to Section 25-7-109(2)(d), C.R.S., the following Emission Regulations are issued:

- I. No person, wherever located, shall cause or allow the emission of odorous air contaminants from any single source such as to result in detectable odors which are measured in excess of the following limits:
  - I.A. For areas used predominantly for residential or commercial purposes it is a violation if odors are detected after the odorous air has been diluted with seven (7) or more volumes of odor free air.
  - I.B. In all other land use areas, it is a violation if odors are detected after the odorous air has been diluted with fifteen (15) or more volumes of odor free air.
  - I.C.
    - I.C.1. When the source is a manufacturing process, the source shall have an affirmative defense to a violation of Sections I.A. and I.B., Part A, of this Regulation Number 2, provided that the source demonstrates that it is utilizing the best practical treatment, maintenance, and control currently available in order to maintain the lowest possible emission of odorous gases. In determining whether the source has met its burden of utilizing the best practical control methods, the source need not consider any method which would result in an arbitrary and unreasonable taking of property or in the practical closing of any lawful business or activity, if such would be without corresponding public benefit.
    - I.C.2. For all areas it is a violation when odors are detected after the odorous air has been diluted with one hundred twenty seven (127) or more volumes of odor free air in which case provisions of Section I.C.1., Part A, of this Regulation Number 2 shall not be applicable.
- II. For the purposes of this Part A of Regulation Number 2, two odor measurements shall be made within a period of one hour, these measurements being separated by at least fifteen (15) minutes. These measurements shall be made outside the property line of the property from which the emission originates.
- III. For the purposes of this Part A of Regulation Number 2, personnel for evaluating odors shall be selected using a "detectability rating test" as outline in "Selection and Training of Judges for Sensory Evaluation of the Intensity and Character of Diesel Exhaust Odors." USPHS Pub. #999-AP-32.

- IV. An instrument, device, or technique designated by the Colorado Air Pollution Control Division may be used in the determination of the detectability of an odor and may be used as a guide in the enforcement of this Part A of Regulation Number 2.
- V. The provisions of this Part A of Regulation Number 2 shall apply throughout the State of Colorado. Except that this Part A of Regulation Number 2 shall not apply to housed commercial swine feeding operations, or to agricultural production that is not considered a major stationary source.

## **PART B HOUSED COMMERCIAL SWINE FEEDING OPERATIONS**

### **I. Applicability**

The provisions of Regulation Number 2, Part B shall apply statewide, to new, expanded, and existing housed commercial swine feeding operations, with the following exception. This Part B of Regulation Number 2 is intended to work in conjunction with Section 61.13 of the Water Quality Control Commission's Colorado Discharge Permit System Regulations Number 61.

### **II. Definitions**

The following terms are defined specifically for this Part B of Regulation Number 2. For any terms not defined in this Part B of Regulation Number 2, the definitions in the Colorado Air Pollution Prevention and Control Act (Sections 25-7-101, C.R.S., et seq.) and Commission's Common Provisions (5 C.C.R. 1001-2) shall apply.

#### **II.A. Aerobic**

Means a waste treatment method that utilizes air or oxygen.

#### **II.B. Anaerobic**

Means a waste treatment method that, in whole or in part, does not utilize air or oxygen.

#### **II.C. Applicable Requirements**

Means all of the following as they apply to emissions units in a housed commercial swine feeding operation:

II.C.1. any term or condition of any permit to operate issued pursuant to this Part B of Regulation Number 2;

II.C.2. any standard or other requirement provided for in this Part B of Regulation Number 2; and

II.C.3. any standard or other requirement provided for in the State Act or Commission regulations that apply to housed commercial swine feeding operations.

#### **II.D. Aquifer**

Means a formation, group of formations, or part of a formation containing sufficient saturated permeable material that could yield a sufficient quantity of water that may be extracted and applied to a beneficial use.

#### **II.E. Capable of Housing**

Means the combined maximum capacities of the housing units that are included in the housed commercial swine feeding operation. Unless the owner of the housed commercial swine feeding operation provides information about the specific operation to the Division, which demonstrates that an alternative capacity calculation is appropriate for that housed commercial swine feeding operation, operations will be presumed capable of housing eight hundred thousand (800,000) pounds or more of live animal weight if they have the capacity to house:

II.E.1. 11,500 weaning swine (70 pounds or less);

II.E.2. 3,020 swine (70 pounds up to finish weight);

II.E.3. 2,000 breeding sows and/or boars; and

where more than one of the above-listed categories of swine of varying sizes are present, housed commercial swine feeding operations will be deemed capable of housing eight hundred thousand (800,000) pounds or more of live animal weight if, by dividing the capacity for the number of each type of swine by the respective limit from Sections II.E.1., II.E.2., and/or II.E.3., Part B, of this Regulation Number 2, above, the sum of the resulting numbers is one (1) or greater.

II.F. Common or Affiliated Ownership or Management

Means:

II.F.1. housed commercial swine feeding operations owned by the same entity;

II.F.2. housed commercial swine feeding operations owned by entities related through majority ownership; or

II.F.3. housed commercial swine feeding operations with structural, organizational, or contractual relationships that evidence actual or effective control of the management of the aspects of a housed commercial swine feeding operation related to swine production or swine waste process wastewater conveyance, storage, treatment, or land application systems.

II.G. Cover

Means a man-made, man-applied, or man-operated device, technology, or material that encompasses the entire surface area of a process wastewater vessel or waste impoundment so as to capture, recover, incinerate or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emissions of such gases into the atmosphere.

II.H. Division

Means for purposes of Regulation Number 2, Part B the Division of Administration of the Colorado Department of Public Health and Environment.

II.I. Existing Source

Means any housed commercial swine feeding operation that has commenced construction prior to or on March 30, 1999.

II.J. Housed Commercial Swine Feeding Operation

Means a housed swine feeding operation that is capable of housing eight hundred thousand (800,000) pounds or more of live animal weight of swine at any one time or is deemed a commercial operation under local zoning or land use regulations.

Two or more housed swine confined feeding operations shall be considered to comprise a single housed commercial swine feeding operation if they are both:

II.J.1. under common or affiliated ownership or management, and

II.J.1.a. are adjacent to or utilize a common area or system for manure disposal; or

II.J.1.b. are integrated in any way; or

II.J.1.c. are located or discharge within the same watershed or into watersheds that are hydrologically connected; or

II.J.1.d. are located on or discharge onto land overlying the same ground water aquifer.

II.K. Housed Swine Feeding Operation

Means the practice of raising swine in buildings, or other enclosed structures wherein swine of any size are fed for forty-five (45) days or longer in any twelve (12) month period, and crop or forage growth or production is not sustained in the area of confinement.

II.L. Integrated in Any Way

Means separate operations that are related in a manner that creates a reasonable potential for the operations to result in a measurable cumulative impact on water quality or air quality at any one location.

II.M. Land Application

Means any process wastewater or manure being applied directly to the land for land disposal, land treatment, or irrigation and does not include the discharge to surface waters or loading of process wastewater vessels or waste impoundments even if such waters are subsequently diverted and applied to the land.

II.N. Manure

Means feces, urine, litter, bedding, or feed waste from housed commercial swine feeding operations.

II.O. New Source

Means any housed commercial swine feeding operation that has not commenced construction prior to or on March 30, 1999.

II.P. Open Animal Feeding Operation

Means pens or similar confinement areas with dirt, concrete, or other paved or hard surfaces wherein swine are substantially or entirely exposed to the outside environment and are located at a housed commercial swine feeding operation. For the purposes of Part B of this Regulation

Number 2, the term open animal feeding operation is synonymous with the terms yard, pasture lot, dirt lot, and dry lot, for swine, as these terms are commonly used in the agricultural industry.

II.Q. Permit to Operate

Means the same as a “construction permit” or “emission permit”, and is the permit required under Section 25-7-114.2, C.R.S.

II.R. Process Wastewater Vessel

Means a facility or part of a housed commercial swine feeding operation, other than a waste impoundment, which is used for the storage, treatment, evaporation or discharge of pollutant-containing wastewater, swine feeding process wastewater, waste solids, sludge, or associated sediment from a housed commercial swine feeding operation.

II.S. Receptor

Means any occupied dwelling used as a primary dwelling or its curtilage, a public or private school, or a place of business.

II.T. Swine Feeding Process Wastewater

Means any process-generated wastewater used in a housed commercial swine feeding operation, including water used for feeding, flushing, or washing, and any water or precipitation that comes into contact with any manure, urine, or any product used in or resulting from the production of swine. As used in this Part B of Regulation Number 2, “process wastewater” shall mean “swine feeding process wastewater.”

II.U. Utilizes Air or Oxygen

Means a waste treatment method that utilizes air or oxygen at a minimum at one (1) part per million of dissolved oxygen throughout the liquid column of the impoundment or a waste treatment method that is designed to meet the oxygen demand of the waste loading.

II.V. Waste Impoundment

Also termed “impoundment”, means a facility or part of a housed commercial swine feeding operation which is a natural topographic depression, man-made excavation, or diked area formed of man-made or earthen materials, which is used for the storage, treatment, evaporation or discharge of pollutant-containing wastewater, waste solids, sludge, or associated sediment from a housed commercial swine feeding operation.

II.W. Watershed

Means a hydrologic unit no larger than an eight (8)-digit unit as displayed on the U.S. Geologic Survey 1974 Hydrologic Unit Map for the State of Colorado. The phrase “watersheds that are hydrologically connected” shall mean watersheds that are contiguous and tributary to the same four-digit unit. Provided, that two (2) or more housed commercial swine feeding operations shall not be considered to be located in the same watershed or in watersheds that are hydrologically connected if the owner or operator demonstrates that there is no reasonable potential for the operations to result in a cumulative impact on water quality at any one (1) location.

II.X. Working Capacity

Means the number of weaned swine that the housed commercial swine feeding operation is capable of housing at one time.

### III. Odor Standards for Housed Commercial Swine Feeding Operations

#### III.A. Odor Concentration Standard at Property Boundary

III.A.1. All housed commercial swine feeding operations shall manage odor emissions from all aspects of the operations such that odor emissions from the operations shall not be detected at or beyond the property boundary after the odorous air has been diluted with seven (7) or more volumes of odor free air.

III.A.2. For the purposes of this Part B of Regulation Number 2, two (2) odor measurements shall be made within a period of one (1) hour, these measurements being separated by at least fifteen (15) minutes. These measurements shall be made at the property line of the property from which the emission originates.

#### III.B. Odor Concentration Standard at Any Receptor

III.B.1. All housed commercial swine feeding operations shall manage odor emissions from all aspects of the operations such that odor emissions from the operations shall not be detected at any off-site receptor after the odorous air has been diluted with two (2) or more volumes of odor free air.

III.B.2. For the purposes of this Part B of Regulation Number 2, two (2) odor measurements shall be made within a period of one (1) hour, these measurements being separated by at least fifteen (15) minutes. These measurements shall be made at the receptor.

### IV. Technology Requirements for Process Wastewater Vessels and Impoundments

#### IV.A. Anaerobic Process Wastewater Vessels and Impoundments

##### IV.A.1. New or Expanded

All new or expanded anaerobic process wastewater vessels and impoundments, including, but not limited to, waste treatment or storage impoundments, constructed or under construction for use in connection with a housed commercial swine feeding operation, shall employ an approved cover or be operated with technologies or practices that are as effective as covers at minimizing odor from the operation, to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere. The housed commercial swine feeding operation shall submit to the Division information sufficient to demonstrate that the technologies and practices used are as effective as covers at minimizing odor from the operation. Requirements concerning the use and maintenance of the technologies or practices employed shall be included in the permit to operate for the housed commercial swine feeding operation. All new anaerobic process wastewater vessels and impoundments shall meet the setback requirements of Section V., Part B, of this Regulation Number 2.

##### IV.A.2. Existing

On or before July 1, 1999, all existing anaerobic process wastewater vessels and impoundments, including, but not limited to, aeration tanks and waste treatment or

storage impoundments, owned or operated for use in connection with a housed commercial swine feeding operation, shall employ a cover or be operated with technologies or practices that are as effective as covers at minimizing odor from the operation as provided in Sections IV.A.3.a. through IV.A.3.d., Part B, of this Regulation Number 2 so as to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere. The housed commercial swine feeding operation shall submit to the Division information sufficient to demonstrate that the technologies and practices used are as effective as covers at minimizing odor from the operation. Requirements concerning the use and maintenance of the technologies or practices employed shall be included in the permit to operate for the housed commercial swine feeding operation.

#### IV.A.3. All Anaerobic process Wastewater Vessels and Impoundments

IV.A.3.a. The anaerobic treatment process wastewater vessel or impoundment shall employ an approved cover or be operated with technologies or practices that are as effective as covers at minimizing odor from the operation so as to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere.

IV.A.3.b. Approved covers must constitute a continuous, physical barrier between the anaerobic process wastewater and the ambient air that completely covers the anaerobic process. The cover must have no uncontrolled vents. Odor emissions from the anaerobic process wastewater vessel or impoundment may not be vented to the atmosphere. Rather, vents must be connected to equipment designed to capture, control, combust and/or treat the odorous emissions.

IV.A.3.c. Approved covers include, but are not limited to, the following:

IV.A.3.c.(1) Rigid covers, such as geodesic domes or other structures, which constitute a building roof or hard cap over the anaerobic process wastewater vessel or impoundment.

IV.A.3.c.(2) Synthetic covers made of reinforced polypropylene, high-density polyethylene, or other synthetic material, including geosynthetic membranes and geomembrane covers. Synthetic covers can be supported by cables or other structures above the stored liquid, or can float on, or be inflated above, the waste liquids surface. The cover must have a minimum thickness of forty (40) mils.

IV.A.3.c.(3) Any other cover approved by the Division with comparable effectiveness to the above approved covers to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere. The owner or operator of a housed commercial swine feeding operation shall include in an application for a permit to operate credible evidence of the effectiveness of such device, technology, or material. In addition, the owner or operator must demonstrate the continuous effectiveness of such alternative cover within one hundred and eighty (180) days of the Division's issuance of the permit to operate. The owner or operator shall make such a demonstration through monitoring or as otherwise provided in

the permit to operate. The Division may condition final approval of such cover upon such additional demonstrations as may be necessary to prove that such cover will minimize or manage, to the greatest extent practicable, emissions of odorous gases throughout the year. If the owner or operator fails to make such demonstration of effectiveness, the owner or operator shall promptly submit to the Division, for incorporation into the permit to operate, a compliance schedule for the installation and operation of an approved cover as soon as possible but no later than one hundred and eighty (180) days of the Division's determination of ineffectiveness.

IV.A.3.d. The owner or operator of a housed commercial swine feeding operation that employs technologies or practices associated with an anaerobic process wastewater vessel or impoundment must submit to the Division information sufficient to demonstrate that such technologies or practices are as effective as covers at minimizing odor from the operation.

IV.A.3.d.(1) The owner or operator shall include such information in an application for a permit to operate including olfactometry, scentometry or other test methods that have been reviewed and approved by the Division to demonstrate the effectiveness of technologies or practices in minimizing odor compared to Division-approved covers.

IV.A.3.d.(2) The owner or operator must demonstrate the continuous effectiveness of such technologies or practices within one hundred and eighty (180) days of the Division's issuance of the permit to operate. The owner or operator shall make such a demonstration through monitoring or other test methods as otherwise provided in the permit to operate. The Division may condition final approval of such technologies or practices upon such additional demonstrations as may be necessary to prove that such technologies or practices will minimize or manage, to the greatest extent practicable, emissions of odorous gases throughout the year. If the owner or operator fails to make such demonstrations of effectiveness, the owner or operator shall promptly submit to the Division, for incorporation into the permit to operate, a compliance schedule for the installation and operation of an approved cover, or other technology or practice approved by the Division as soon as possible but no later than one hundred and eighty (180) days of the Division's determination of ineffectiveness.

IV.A.3.e. An owner or operator may install a covered anaerobic treatment digester (including covered sequencing batch reactors) that treats the manure or process wastewater resulting from operations of the housed commercial swine feeding operation. Any associated process wastewater vessels and waste impoundments must be maintained as aerobic or the cover requirement of Section IV.A., Part B, of this Regulation Number 2 shall apply.

IV.A.3.f. The following covers are considered to be experimental and/or of variable effectiveness and may be used for initial demonstrations of compliance to cover existing anaerobic process wastewater vessels and

impoundments, but if the owner or operator is unable to demonstrate continuous compliance and effectiveness comparable to approved covers in Section IV.A.3.b., Part B, of this Regulation Number 2 in capturing, recovering, incinerating, or otherwise managing odorous gases to minimize, to the greatest extent practicable, the emission of such odorous gases into the atmosphere, within one hundred and eighty (180) days of issuance of the permit to operate, the owner or operator shall submit a compliance schedule for the installation and operation of a approved cover in accordance with the provisions of Section VI.D.8.b., Part B, of this Regulation Number 2. The owner or operator shall provide in the compliance schedule for the installation of an approved cover as soon as possible, but no later than January 1, 2000. The Division may extend the date for continuous demonstration of compliance an additional one hundred and eighty (180) days as necessary to require the owner or operator to demonstrate that the experimental cover will minimize, to the greatest extent practicable, the emission of odorous gases into the atmosphere.

IV.A.3.f.(1) Biocovers, such as wheat straw or barley straw, as long as the material is properly maintained so as not to leave any portion of the surface uncovered for any period of time.

IV.A.3.f.(2) Aerobic covers must comprise at least the top three (3) feet of the anaerobic process wastewater vessel or impoundment. An aerobic cover must utilize air or oxygen.

IV.A.3.g. The owner or operator of a housed commercial swine feeding operation may choose among several approved alternatives for managing the odorous gases produced from the covered anaerobic process wastewater vessel or impoundment, so long as the alternative is designed, operated, and maintained to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere. Approved technologies are as follows:

IV.A.3.g.(1) Incineration. Vented gases may be collected and incinerated through the use of a flare, incinerator, or other device designed to burn waste gases.

IV.A.3.g.(2) Combustion, as part of an energy recovery operation. Gases may be collected and combusted to operate a gas turbine, engine generator set, boiler, or heater, to produce usable energy.

IV.A.3.g.(3) Add-on Control Equipment. Vented gases may be treated by the use of biofilters or wet scrubbers designed to remove odor emissions, including hydrogen sulfide, particulate matter, and ammonia gases, to the greatest extent practicable.

IV.A.3.g.(4) Any other device, technology, or process approved by the Division as comparably effective as the technologies listed in Section IV.A.3.g.(1) through IV.A.3.g.(3).

#### IV.B. Aerobic Impoundments

##### V.B.1. New

Owners and operators of new aerobic impoundments shall employ technologies to ensure maintenance of aerobic conditions or otherwise to minimize the emission of odorous gases to the greatest extent practicable. Requirements concerning the use and maintenance of the technologies employed shall be included in the permit to operate for the housed commercial swine feeding operation. All new aerobic impoundments shall meet the setback requirements of Section V., Part B, of this Regulation Number 2.

#### IV.B.2. Existing

On or before July 1, 1999, all existing aerobic impoundments shall install and have operational technologies to ensure maintenance of aerobic conditions or otherwise to minimize the emission of odorous gases to the greatest extent practicable. Requirements concerning the use and maintenance of the technologies employed shall be included in the permit to operate for the housed commercial swine feeding operation.

### V. Setback Requirements for New Land Waste Application Site or New Waste Impoundment

#### V.A. Air Quality Setbacks

No new land waste application site or new waste impoundment used in connection with a housed commercial swine feeding operation, shall be located less than:

- V.A.1. One (1) mile from an occupied dwelling without the written consent of the owner of the dwelling;
- V.A.2. One (1) mile from a public or private school without the written consent of the school's board of trustees or board of directors; and
- V.A.3. One (1) mile from the boundaries of any incorporated municipality without the consent of the governing body of the municipality by resolution.

A new land waste application site is a land waste application site that was not in use as of June 1, 1998. A new waste impoundment is a waste impoundment that was not in use as of June 1, 1998.

#### V.B. Air Quality Setback Measurements and Waivers

V.B.1. The one (1) mile setback is a required part of the permit to operate for a housed commercial swine feeding operation.

V.B.2. The setback distances specified in this Part B of Regulation Number 2 may be waived with the consent of the party benefited by the setback distance.

V.B.2.a. A waiver granted by a private property owner becomes effective upon being recorded with the county clerk of the county where the affected property is located. The waiver shall reflect the full legal description of the proposed housed commercial swine feeding operation site, the full legal description of the property for which the waiver is granted, and the signature of the owner of record as of that date. A certified copy of this recording shall be provided to the Division as part of the permit to operate application. If the proposed housed commercial swine feeding operation site is in a different county than the affected property, the waiver shall also be filed in the county where the proposed housed commercial swine feeding operation site is located.

V.B.2.b. Public schools and incorporated municipalities shall approve a waiver of setback requirements by action of the governing body. A certified copy of the final action approving the waiver shall be included with the application.

VI. Permit to Operate

VI.A. General considerations

VI.A.1. Existing Sources

VI.A.1.a. No person shall operate an existing housed commercial swine feeding operation without submitting a complete and accurate application for a permit to operate to the Division for the housed commercial swine feeding operation by April 15, 1999. The owner or operator shall also file a copy of the application for a permit to operate with the county clerk and with the local or regional health department for the county(ies) in which the housed commercial swine feeding operation is located. The owner or operator shall follow the procedures and requirements set forth in this Part B of Regulation Number 2 for obtaining and modifying a permit to operate from the Division. The permit to operate application shall include an odor management plan that demonstrates the housed commercial swine feeding operation is in compliance with this Part B of Regulation Number 2.

VI.A.1.b. A timely and complete application for a permit to operate for existing sources under the provisions of this Part B of Regulation Number 2 shall operate as a defense to an administrative enforcement action for the housed commercial swine feeding operation's failure to have a permit to operate until the Division or the Commission make a final determination on the permit to operate application. This defense to an enforcement action shall not apply if, subsequent to the completeness determination, the applicant fails to submit by the deadline specified in writing by the Division any additional information identified as necessary to process the application, or to otherwise supplement its application in accordance with the provisions of Part B, of this Regulation Number 2. This defense to an enforcement action shall not be available to an applicant who files a fraudulent application.

VI.A.2. New or Expanded Sources

No person shall commence construction, expansion, reconstruction, or modification of a housed commercial swine feeding operation without obtaining or having a valid permit to operate from the Division for the housed commercial swine feeding operation. The owner or operator shall follow the procedures and requirements set forth in this Part B of Regulation Number 2 for obtaining and modifying a permit to operate. The application for a permit to operate shall include an odor management plan that demonstrates the housed commercial swine feeding operation is in compliance with this Part B of Regulation Number 2.

VI.A.3. New, Expanded, and Existing Sources

VI.A.3.a. Any permit which has been issued pursuant to a prior regulation of the Commission, with respect to a project or the operation thereof, shall continue in full force and effect for the purpose for which it was

originally issued, unless this current regulation no longer requires such permit, in which case the permit can be rescinded by the Division upon request of the owner or operator of the permitted source. The source may request the Division to consolidate any previously issued permit with a permit to operate required under this Part B of Regulation Number 2.

VI.A.3.b. Any order or decision of the Division shall be final upon issuance.

VI.A.3.c. The owner or operator of a housed commercial swine feeding operation shall pay the Division permit processing fees in the amounts and subject to the limits specified in the provisions of the Colorado Revised Statutes Section 25-7-114.7 for the costs of processing an application for a permit to operate.

#### VI.A.4. Transfer or Assignment of Ownership

VI.A.4.a. If transfer or assignment of ownership or operation of an air pollution emission source permitted pursuant to this Part B of Regulation Number 2 is anticipated, the prospective owner or operator shall apply to the Division on Division supplied administrative permit to operate amendment forms for re-issuance of the existing permit to operate. To revise a permit to operate for a transfer or assignment of ownership or operation, the owner or operator must submit an amendment form to the Division no later than thirty (30) days after a change in the owner or operator of any facility, process, or activity of a housed commercial swine feeding operation.

VI.A.4.b. In accordance with the provisions of this Section VI.A.4., Part B, of this Regulation Number 2, the permit to operate shall be reissued upon completion of the transfer or assignment if the applicant certifies that no change is contemplated which might constitute a new, expanded, or modified air pollution source. In no event shall the new owner or operator of a housed commercial swine feeding operation which was subject to the requirements of this Part B of Regulation Number 2 prior to the transfer or assignment be relieved of the obligation to comply with such requirements by reason of a transfer. Such transfers are subject to all applicable permit processing and inspection fees.

VI.A.4.c. If a company is changing its name only, the owner or operator shall apply to the Division, on Division supplied administrative permit to operate amendment forms, for re-issuance of the existing permit to operate.

VI.A.4.d. No administrative permit to operate amendment for transfer or assignment of ownership of a source shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage and liability between the current and new permittee is received by the Division.

#### VI.B. Option for a Pre-Application Meeting

Prior to submitting an application for a permit to operate an applicant may request and, if so requested, the Division shall grant, a pre-application meeting with the applicant. At such meeting, the Division shall advise the applicant of the applicable requirements, including the information,

plans, specifications and the data required to be furnished with the application for the permit to operate.

#### VI.C. Application for a Permit to Operate

VI.C.1. An application for a permit to operate shall be prepared on forms currently supplied by the Division.

VI.C.2. Applications shall be signed by a person legally authorized to act on behalf of the applicant. The applicant shall furnish all information and data required by the Division to evaluate the application for a permit to operate and to make its preliminary analysis.

VI.C.3. An application for a permit to operate will not be deemed to be complete until all information and data required to evaluate the application have been submitted to the Division. Within sixty (60) calendar days after the receipt of an application or any supplemental information requested by the Division, the Division will give notice to the applicant if and in what respect the application is incomplete. If the Division fails to notify an applicant that the application is incomplete within sixty (60) calendar days of receipt of the original application or receipt of the requested supplemental information, the application shall be deemed to have been complete as of the day of receipt by the Division of the original application or receipt of the requested supplemental information. The application shall be deemed to have been complete as of the day of receipt by the Division of the application or the last submitted supplemental information, whichever is later, for purposes of the application shield discussed in Section VI.A.1.b., Part B, of this Regulation Number 2. Nothing herein precludes the Division from requesting further information about the housed commercial swine feeding operation in order to process the application for a permit to operate. If the Division concludes that the application is not complete, it shall inform the applicant of the additional information, which must be submitted prior to consideration of the application.

#### VI.C.4. Completeness Determinations

VI.C.4.a. The Division shall review each application submitted to determine whether it is complete. An application shall be deemed to be complete when it contains the information required by Sections VI.C.2., VI.C.3., and VI.D., Part B, of this Regulation Number 2 in sufficient detail for the Division to evaluate the subject housed commercial swine feeding operation and the application for a permit to operate and to determine all applicable requirements.

VI.C.4.b. An owner or operator shall supplement the application for a permit to operate to correct or update information provided in its initial submission as soon as it becomes aware of any omissions or incorrect information submitted or to address changes made to the housed commercial swine feeding operation after submission of the application.

VI.C.4.c. An owner or operator shall supplement its application for a permit to operate to address any requirements that become applicable to the housed commercial swine feeding operation after the date the owner or operator submitted its application, but prior to the Division's issuance of a draft permit to operate.

#### VI.C.5. Requests for Additional Information

If, after an application for a permit to operate is deemed complete, the Division determines that additional information is necessary to evaluate or take final action on an application, the Division shall request necessary information in writing and set a reasonable deadline for response. Additional information submitted by the deadline will be evaluated by the Division. If the applicant fails to provide the requested information or does not meet the deadline, the housed commercial swine feeding operation's ability to operate without a permit to operate shall terminate on the date of the deadline.

#### VI.C.6. Preliminary Analysis

The Division shall prepare its preliminary analysis within sixty (60) calendar days after receipt of a complete application for a permit to operate. The preliminary analysis allows the Division to determine whether the housed commercial swine feeding operation will upon issuance of the permit to operate for existing sources or at the date of commencement of operation for new sources comply with all applicable emission control regulations.

#### VI.D. Content of Permit to Operate and Application for a Permit to Operate

A permit to operate and application for a permit to operate shall contain at a minimum the following:

VI.D.1. A complete and accurate odor management plan that minimizes to the greatest extent practicable off-site odor emissions (see Section VII).

VI.D.2. A description of the cover, technologies and/or practices employed to capture, recover, incinerate, or otherwise manage odorous gases from anaerobic process wastewater vessels and impoundments to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere.

VI.D.2.a. For existing sources subject to the requirements of Section IV.A.2., Part B, of this Regulation Number 2, if a cover and related technologies will not be installed by July 1, 1999:

VI.D.2.a.(1) A description of the status of any cover installation.

VI.D.2.a.(2) A cover schedule identifying the installation date, enforceable milestones, and an installation date as soon as practicable but no later than July 1, 2000. The cover schedule shall be at least as stringent as that contained in any judicial consent decree or administrative order to which the existing source is subject.

VI.D.2.a.(3) Progress reports, consistent with the cover schedule, to be submitted at least quarterly, or more frequently if specified by the Division. Such progress reports shall contain dates for achieving the activities or milestones required in the cover schedule, dates when such activities or milestones were achieved, an explanation of why any dates in the schedule were not or will not be met, and any preventative or corrective measures adopted.

VI.D.2.a.(4) Requirements for certifying compliance with the cover schedule.

VI.D.3. The technologies employed to ensure the maintenance of aerobic conditions or otherwise minimize to the greatest extent practicable the emission of odorous gases from aerobic impoundments to the atmosphere.

VI.D.4. The applicable emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of the Division's issuance of the permit to operate.

VI.D.5. All applicable monitoring requirements.

VI.D.6. All applicable recordkeeping requirements.

VI.D.7. All applicable reporting requirements.

VI.D.8. The following elements with respect to compliance with requirements other than those addressed in Section VI.D.2.a., Part B, of this Regulation Number 2:

VI.D.8.a. For existing sources a compliance plan that contains:

VI.D.8.a.(1) A description of the compliance status of the existing source with respect to all applicable requirements; and

VI.D.8.a.(2) Requirements for which the existing source is not anticipated to be in compliance, at the time of issuance of the permit to operate, a narrative description of how the existing source will achieve compliance with such requirements.

VI.D.8.b. A compliance schedule for existing sources that will not be in compliance at the time of issuance of the permit to operate. The compliance schedule shall contain:

VI.D.8.b.(1) A list of applicable requirements with which the source is in compliance and a statement that the existing source will continue to comply with such requirements.

VI.D.8.b.(2) A schedule of compliance at the time of issuance of the permit to operate; this schedule shall include a schedule of enforceable remedial milestones, leading to compliance with any applicable requirements for which the existing source will be in noncompliance at the time of issuance of the permit to operate. Compliance must be achieved as soon as possible, but not later than January 1, 2000. This compliance schedule shall be at least as stringent as that contained in any judicial consent decree or administrative order to which the existing source is subject.

VI.D.8.b.(3) Any schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

VI.D.8.c. Progress reports consistent with an applicable schedule of compliance to be submitted at least quarterly, or at a more frequent period if so specified in the applicable requirement or by the Division. Such progress reports shall contain the following:

VI.D.8.c.(1) Dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved.

VI.D.8.c.(2) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.

VI.D.8.d. Requirements for compliance certification with terms and conditions contained in the permit to operate, including emission limitations, standards, or work practices. A permit to operate shall include each of the following:

VI.D.8.d.(1) The frequency of submission of compliance certifications (annual unless otherwise specified);

VI.D.8.d.(2) A means of monitoring the compliance of the existing source with its emission limitations, standards, and work practices;

VI.D.8.d.(3) A requirement that the compliance certification includes: a) the identification of each permit term and condition that is the basis of the certification; b) the compliance status; c) whether compliance was continuous or intermittent; d) the method(s) used for determining the compliance status of the existing source, currently and over the reporting period; and e) such other facts as the Division may require to determine the compliance status of the existing source;

VI.D.8.d.(4) Any additional requirements for compliance certification; and

VI.D.8.d.(5) Such other provisions as the Division may require.

#### VI.E. Hearing and Public Comment Requirements

VI.E.1. The Division shall in a timely manner, for applications for permits to operate for existing sources, cause public notice to be published in a newspaper of general distribution in the area in which the existing sources are located that applications will be on file with the county clerk for the county(ies) in which the housed commercial swine feeding operation is located on April 15, 1999. The notice shall comply with the requirements set out in Section VI.E.2.a through VI.E.2.d. and VI.E.2.f. through VI.E.2.h., Part B, of this Regulation Number 2, except that the notice will inform the public that the Division will receive public comments on the application for a period ending May 15, 1999.

VI.E.2. For new operations, the Division shall, within fifteen (15) calendar days after the preparation of the preliminary analysis, cause public notice of the application to be published in a newspaper of general distribution in the area in which the proposed operation will be located, and a copy of the preliminary analysis and application to be filed with the county clerk(s) for the county(ies) in which the source is or will be located and shall send written notice to persons requesting notice of an application for a permit to operate for the type of area or source affected. Such notice shall state:

- VI.E.2.a. The location and nature of the proposed activity or project for which a permit to operate application has been filed;
  - VI.E.2.b. The locations where the application and preliminary analysis are available for public inspection;
  - VI.E.2.c. That comments concerning the ability of the proposed project or activity to comply with the applicable standards and regulations of the Commission are solicited from any interested person;
  - VI.E.2.d. That the Division will receive and consider public comments for thirty (30) calendar days after such publication;
  - VI.E.2.e. The Division's preliminary determination of approval, conditional approval, or disapproval of the application and/or compliance plan;
  - VI.E.2.f. That comments are solicited on an innovative technological system for pollution control if proposed by the applicant;
  - VI.E.2.g. That comments are solicited on the air quality impacts of the housed commercial swine feeding operation or modification; and
  - VI.E.2.h. That comments are solicited on alternatives available to the housed commercial swine feeding operation.
- VI.E.3. For existing housed commercial swine feeding operations, within fifteen (15) calendar days after the preparation of the preliminary analysis the Division shall forward to the applicant written notice of the applicant's right to a formal hearing before the Commission with respect to the application. A hearing request by the applicant must be provided to the Division within thirty (30) days of the issuance of the permit to operate.
  - VI.E.4. For new housed commercial swine feeding operations, a hearing request by the applicant must be provided to the Division within thirty (30) days of publication of the notice for public comment.
  - VI.E.5. A hearing request pursuant to Section VI.E.4., Part B, of this Regulation Number 2 must be transmitted by the Division to the Commission, along with the complete application for a permit to operate, the preliminary analysis, and any written comments received by the Division within five (5) days after the end of the thirty (30) day comment period; except that for existing housed commercial swine feeding operations the Division will transmit the required information to the Commission within five (5) days after receipt of the hearing request.
  - VI.E.6. Applicants appealing any final decision of the Division shall follow the Commission's Procedural Rules (5 C.C.R. 1001-1, Section 1.6.0).

#### VI.F. Permit to Operate Review Requirements

Within thirty (30) calendar days following the completion of the Division's preliminary analysis for applications for existing sources, within thirty (30) calendar days following the period for public comment for new sources, or if a hearing is held, within thirty (30) calendar days following such hearing, the Division or the Commission, as the case may be, shall grant the permit to operate if it finds that the proposed housed commercial swine feeding operation or activity will meet all

applicable requirements in this Part B of Regulation Number 2 and any other applicable Commission regulations.

VI.G. Denial or Revocation of the Permit to Operate

- VI.G.1. If the Division determines that a housed commercial swine feeding operation cannot comply or does not operate in compliance with the provisions of Section VI., Part B, of this Regulation Number 2, the Division shall issue its written denial of the application for a permit to operate stating the reasons for such denial. Any Division denial of a permit to operate shall become final upon mailing of the denial notice to the applicant by certified mail. The applicant may appeal the Division's final denial of a permit to operate as provided in Section VI.G.3., Part B, of this Regulation Number 2.
- VI.G.2. Any applicant for a permit to operate shall advise the Division in writing of any refusal to accept any permit condition imposed by the Division within thirty (30) calendar days after receipt of the permit to operate. Such refusal shall be deemed a denial of the application for a permit to operate.
- VI.G.3. If the Division denies a permit to operate, the conditions imposed upon a permit to operate are contested by the applicant, or the Division revokes a permit to operate, the applicant or owner or operator may request a hearing before the Commission for review of the Division's action. The hearing shall be heard in accordance with the provisions of Section 25-7-114(4)(h), C.R.S. and Section 25-7-119, C.R.S. of the Act and Section 24-4-105, C.R.S. (State Administrative Procedures Act).

VI.H. Final Approval of a Permit to Operate

- VI.H.1. Unless prior and mutually acceptable arrangements have been made, the applicant shall not commence the operation of a new source for which a permit to operate has been issued or reinstated without giving notice to the Division, thirty (30) calendar days prior to the date on which commencement will take place.
- VI.H.2. Within one hundred eighty (180) calendar days after commencement of operation of a new source the owner or operator shall demonstrate to the Division compliance with the terms and conditions of the permit to operate and the Division may inspect the housed commercial swine feeding operation to determine whether or not the operating terms and conditions of the permit to operate have been satisfied.
- VI.H.3. Before the Division grants final approval of the permit to operate, the Division may require the applicant to conduct performance tests in accordance with methods approved by the Division. A test protocol shall be submitted to the Division for review and approval prior to testing. The Division may monitor such tests and may, at its expense, conduct its own performance tests.
- VI.H.4. If the Division determines that the terms and conditions of the permit to operate have been satisfied, the Division shall issue in writing its final approval of a permit to operate to the applicant. Otherwise, the Division shall revoke the permit to operate.
- VI.H.5. Final approval of a permit to operate may be issued at the same time as initial approval for temporary sources within a housed commercial swine feeding operation of a duration of one (1) month or less.

VI.I. Cancellation of a Permit to Operate

Whenever an owner or operator wishes to cancel a permit to operate, the owner or operator shall notify the Division, in writing.

VII. Odor Management Plan

VII.A. The application for a permit to operate shall be accompanied by a complete and accurate odor management plan. An odor management plan is required for each new or existing source. The odor management plan shall be approved by the Division prior to issuance of the permit to operate.

VII.B. A complete and accurate odor management plan shall include a description of and a map which demonstrates the location of each of the operations and processes at the housed commercial swine feeding operation, including the following:

VII.B.1. Swine confinement structures, including open animal feeding operations;

VII.B.2. Manure collection, storage, and treatment systems, including anaerobic process wastewater vessels and impoundments and aerobic impoundments;

VII.B.3. Composting storage sites; and

VII.B.4. Land application equipment and sites.

VII.C. A complete and accurate odor management plan shall also include the following components:

VII.C.1. Construction and design plans for odor controls and management practices, including for the following technologies if applicable:

VII.C.1.a. The necessary technology that shall be employed to minimize to the greatest extent practicable off-site odor emissions from all aspects of the operations at the housed commercial swine feeding operation, including swine confinement structures, animal waste, and composting storage sites, and odor and aerosol drift from land application equipment and sites;

VII.C.2. Operation plans for odor controls and management practices, including plans for the following, if applicable:

VII.C.2.a. Proper operation and maintenance of the necessary technology or practices to minimize to the greatest extent practicable off-site odor emissions from all aspects of the operations at the housed commercial swine feeding operation, including swine confinement structures, animal waste, and composting storage sites, and odor and aerosol drift from land application equipment and sites;

VII.C.2.b. Operation of the required equipment in compliance with manufacturer's specifications and recommendations;

VII.C.2.c. Proper operation and maintenance of covers, technologies and/or practices employed for anaerobic process wastewater vessels and impoundments to capture, recover, incinerate, or otherwise manage

odorous gases to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere; and

VII.C.2.d. Proper operation and maintenance of the necessary technology employed for aerobic impoundments to ensure maintenance of aerobic conditions or otherwise to minimize the emission of odorous gases to the greatest extent practicable.

VII.C.3. An animal waste management plan for odor control and management practices necessary to minimize to the greatest extent practicable off-site odor emissions from all aspects of the operations at the housed commercial swine feeding operation, including swine confinement structures, animal waste, and composting storage sites, and odor and aerosol drift from land application equipment and sites.

VII.D. All plans and specifications for odor control equipment and management practices included in the odor management plan must conform to common and accepted professional practices.

VII.E. Testing, sampling, and analysis requirements appropriate for the housed commercial swine feeding operation.

## VIII. Modification or Reopening of a Permit to Operate

### VIII.A. Modification

The owner or operator must request or the Division may require a modification to the permit to operate and odor management plan when it is necessary to correct operational problems or to incorporate controls that minimize to the greatest extent practicable the emission of odorous gases from anaerobic process wastewater vessels and impoundments into the atmosphere, the emission of odorous gases from aerobic impoundments, and off-site odor emissions from all aspects of the housed commercial swine feeding operations. The owner or operator must obtain approval from the Division prior to initiating any change in operational procedures that may impact odorous gases, including but not limited to the following:

VIII.A.1. Increasing the number of animals permitted at the housed commercial swine feeding operation;

VIII.A.2. Changing animal waste treatment, storage, or disposal practices from those permitted at the housed commercial swine feeding operation;

VIII.A.3. Changing the nature and volume of the animal waste generated at the housed commercial swine feeding operation; and

VIII.A.4. Disposing of animal waste at any locations other than those identified in the permit to operate.

If a housed commercial swine feeding operation is required to modify its permit to operate or odor management plan, it shall pay the Division permit processing fees in the amounts and subject to the limits specified in the provisions of the Colorado Revised Statutes Section 25-7-114.7 for the Division's review of the odor management plan revisions.

### VIII.B. Revocations/Reopening for Cause

VIII.B.1. A permit to operate issued pursuant to this Part B of Regulation Number 2 shall be reopened and revised in accordance with the State Act under any of the following circumstances:

VIII.B.1.a. The Division determines that the permit to operate contains a material mistake or that inaccurate statements were made in establishing the terms or conditions of the permit to operate.

VII.B.1.b. The Division determines that the permit to operate must be revised or revoked to assure compliance with the applicable requirements.

VIII.B.2. Permit to operate reopenings and reissuance shall be processed using the procedures set forth in Section VI., Part B, of this Regulation Number 2 for permit to operate issuance and renewal.

VIII.B.2.a. Proceedings to reopen and reissue permits to operate affect only those parts of the permit to operate for which cause to reopen exists.

VII.B.2.b. Reopenings under this Section VIII.B., Part B, of this Regulation Number 2 shall not be initiated before notice of such intent is provided to the housed commercial swine feeding operation by the Division at least thirty (30) days in advance of the date that the permit to operate is to be reopened.

## IX. Specific Odor Control Requirements

Housed commercial swine feeding operations shall employ technology to minimize to the greatest extent practicable off-site odor emissions from all aspects of its operations.

### IX.A. Mandatory Specific Odor Control Requirements

Housed commercial swine feeding operations shall employ the following odor control technologies and comply with the following work practices at a minimum for all aspects of the operations, unless the owner or operator can demonstrate that an alternative technology or work practice is more effective in minimizing off-site odor emissions from that aspect of the operation to the greatest extent practicable, with the exception of Sections IX.A.2.a. and IX.A.2.b., Part B, Regulation Number 2. In any event, the housed commercial swine feeding operation must comply with the standards in Section III.A. and III.B., Part B, of this Regulation Number 2.

#### IX.A.1. Swine Confinement Structures

Swine confinement structures, including underfloor waste storage areas, must be designed, operated, and maintained to minimize odor emissions. Each swine confinement structure must employ, at a minimum, the following odor control technologies and work practices to minimize odor emissions to the greatest extent practicable, but in any event must meet the standards in Sections III.A. and III.B., Part B, of this Regulation Number 2:

##### IX.A.1.a. Adequate Ventilation

IX.A.1.a(1) Existing sources shall employ the necessary technology and work practices to ensure adequate ventilation and efficient air movement to reduce gases and odors, remove moisture, control temperature, and keep the animals clean.

IX.A.1.a(2) New sources that store and/or treat wastewater, solids, and/or sludges under the floor of the swine building shall employ mechanical underfloor ventilation and add-on control equipment for exhaust vents to the outside.

IX.A.1.b. Dust Management

The dust at a confinement structure must be managed so as to minimize off-site odor emissions to the greatest extent practicable by minimizing the amount of dust in the confinement structure.

IX.A.1.b.(1) The inside of the confinement structure shall be maintained so as to keep the animals reasonably clean.

IX.A.1.b.(2) Bedding shall be replaced as necessary to reduce dust.

IX.A.1.b.(3) The feed delivery downspouts shall be sized to minimize the generation of dust.

IX.A.1.b.(4) The feed storage tanks and containers shall be maintained so as to minimize spills, including keeping mechanical equipment in good repair and removing spilled feed promptly.

IX.A.1.b.(5) Exhaust fans and shutters must be cleaned of dust as necessary.

IX.A.1.b.(6) Building sidewall screens should be cleaned of debris such as dust, cobwebs, and weeds as frequently as necessary.

IX.A.1.c. Manure Management

X.A.1.c.(1) All surfaces (including slotted and slatted floors) on which manure may collect and on which animals are maintained, including floors and walls, should be as clean and dry as possible and with a minimum of cracks and crevices.

IX.A.1.c.(2) Manure must be removed from all of these surfaces as frequently as necessary, by flushing or pit recharge using fresh, recycled, or well treated water, or scraping.

IX.A.1.c.(3) The surfaces shall be completely cleaned and washed down between groups of animals.

IX.A.1.c.(4) Flushing systems shall be flushed as frequently as necessary.

IX.A.1.c.(5) Pit recharge systems shall be partially drained and refilled as frequently as necessary.

IX.A.1.c.(6) The floor surface area on which manure can accumulate shall be minimized.

IX.A.1.c.(7) New sources shall use slotted (also known as slatted) floors or another design as approved by the Division.

IX.A.1.c.(8) Flush tanks shall have a cover and the fill line shall be extended to near the bottom of the tank with an anti-siphon vent.

IX.A.1.c.(9) Sump tanks shall be covered.

#### IX.A.2. Solid Waste and Process Wastewater Collection, Storage, and Treatment Systems

All solid waste and process wastewater held in process wastewater collection, storage and treatment systems, including waste impoundments and anaerobic and aerobic impoundments and vessels, must be stored, treated, and handled in a manner to minimize odor emissions. Solid waste and process wastewater may be stored only in accordance with the following methods:

IX.A.2.a. In anaerobic process wastewater vessels and impoundments, pursuant to the preceding Section IV.A., Part B, of this Regulation Number 2; or

IX.A.2.b. In aerobic impoundments pursuant to the preceding Section IV.B., Part B, of this Regulation Number 2.

IX.A.2.c. The owner or operator shall ensure that separated solids are removed promptly to a storage vessel and managed to minimize off-site odor emissions to the greatest extent practicable, composted in compliance with Section IX.A.3., Part B, of this Regulation Number 2, and/or land applied in compliance with Section IX.A.4., Part B, of this Regulation Number 2.

IX.A.2.d. The owner or operator shall comply with the following practices during operation of process wastewater vessel or waste impoundment:

IX.A.2.d.(1) Treatment and storage vessels and impoundments must be loaded at the proper rate to minimize the emission of odorous gases to the greatest extent practicable;

IX.A.2.d.(2) Loading shall occur on a daily or frequent basis to avoid "shock" loading and upset conditions; and

IX.A.2.d.(3) Loading shall occur through a feeder pipe that discharges below the surface water level; and

IX.A.2.d.(4) Aerobic impoundments shall ensure that there is sufficient oxygen in the impoundment to ensure maintenance of aerobic conditions and utilize air or oxygen as defined in this Part B of Regulation Number 2.

IX.A.2.e. Owners and operators shall minimize release of odorous gases from the liquids in the process wastewater vessels and waste impoundments to the greatest extent practicable.

IX.A.2.f. The owner or operator shall ensure that all pre-treatment digesters are operated to ensure stabilization of the waste and odor control, including operating at the appropriate loading rate, retention time, and temperature.

### IX.A.3. Manure Composting Storage Sites

All solid manure compost operations shall meet at a minimum the following best odor management control practices:

- IX.A.3.a. All compost piles shall be operated to ensure maintenance of proper aerobic conditions at all times or shall be fully contained in a vessel or a covered building to minimize to the greatest extent practicable off-site odor emissions.
- IX.A.3.b. All compost piles shall be aerated using natural, mechanical, or other Division- approved system. If a natural system is used, the owner or operator shall turn the compost pile on a frequent basis (at least weekly or more frequently as necessary to comply with Sections III.A. and III.B., Part B, of this Regulation Number 2). If a mechanical system is used, the owner or operator shall establish and follow operating parameters to minimize to the greatest extent practicable off-site odor emissions.

### IX.A.4. Land Application

Owners and operators land applying process wastewater, solid waste, or sludge shall, at a minimum, comply with the following requirements:

- IX.A.4.a. No land application of process wastewater, solid waste, or sludge shall occur on lands which are saturated, on land where ponding is occurring, or on land with a snow depth of greater than one (1) inch. During this period, wastewater must be impounded or otherwise treated pursuant to this Part B of Regulation Number 2.
- IX.A.4.b. No land application of process wastewater, solid waste, or sludge shall occur on lands which are frozen unless the Water Quality Control Division has approved of the required site-specific analysis demonstrating that run-off will not occur. During this period, wastewater must be impounded or otherwise treated pursuant to this Part B of Regulation Number 2.
- IX.A.4.c. Process wastewater shall be land applied only when the wind conditions are such to minimize off-site transport of the process wastewater.
- IX.A.4.d. Land application on weekends and holidays shall not occur unless the Division approves of a waiver or under dire circumstances or an emergency.
- IX.A.4.e. All process wastewater:
  - IX.A.4.e.(1) that is land applied and not injected shall be pretreated to remove at least sixty five percent (65%) of the total solids and remove over ninety percent (90%) of the volatile fatty acids or achieve at least sixty percent (60%) removal of total volatile solids; or

IX.A.4.e.(2) that is land applied and injected need not be pretreated as described in Section IX.A.4.e.(1), Part B, Regulation Number 2.

IX.A.4.f. All process wastewater disposal operations using pressure spray systems shall meet the following requirements:

IX.A.4.f.(1) Spraying shall occur using minimum recommended operating pressure with a low pressure system that is no greater than twenty (20) psi, unless the process wastewater is pretreated to remove at least sixty percent (60%) of the solids and destroy ninety five percent (95%) of the volatile fatty acids or achieve at least sixty percent (60%) removal of total volatile solids;

IX.A.4.f.(2) Pump intake shall be located near the waste impoundment liquid surface;

IX.A.4.f.(3) A low trajectory system shall be used for spraying; and

IX.A.4.f.(4) Multi-stage waste impoundment systems shall only utilize liquids for land application from the last stage waste impoundment.

IX.A.4.g. Owners and operators land applying any solids separated from process wastewater by screening, settling, or other means, and the land application of any sludge from any process wastewater vessel or impoundment, shall, at a minimum, comply with the following requirements:

IX.A.4.g.(1) All solids or sludges being land applied shall be injected or knifed into the soil immediately upon application. The owner or operator may request and the Division may approve solids or sludges being incorporated into the soil within six (6) hours after application is completed if the owner or operator can demonstrate such a process minimizes to the greatest extent practicable off-site odor emissions.

IX.A.4.g.(2) All solids or sludges applied to the land using subsurface injection methods shall not result in significant amounts of the solids or sludges being present on the surface within one (1) hour after the solids or sludges are injected.

IX.A.4.h. Land application of wastewater shall not be allowed outside of the period of March 1 through October 31.

#### IX.A.5. Carcass Disposal

Owners and operators shall dispose of carcasses in a manner that minimizes to the greatest extent practicable off-site odor emissions, using one of the approved carcass disposal methods described in Sections IX.A.5.a. through IX.A.5.d., Part B, of this Regulation Number 2.

All carcasses shall be refrigerated or kept natural cooled in a covered enclosure if the owner or operator fails or is unable to properly dispose of the carcasses in accordance

with Sections IX.A.5.a. through IX.A.5.d., Part B, of this Regulation Number 2 within twenty-four (24) hours.

IX.A.5.a. Incineration. Owners or operators shall store the carcasses in an enclosure until the carcasses can be incinerated. The carcasses shall be incinerated so as to avoid incomplete combustion. If the incinerator is unable to consistently achieve complete combustion, the owner or operator shall install a secondary stack burner. The owner or operator shall operate the incinerator in compliance with Commission Regulation Number 6 (5 C.C.R. 1001-8), Part B Sections VII. concerning the operation of incinerators.

IX.A.5.b. Burial. Owners or operators shall bury the carcasses after one (1) day of storage. The carcasses shall be completely covered so as to minimize to the greatest extent practicable odor emissions. The carcasses shall be buried so as not to negatively impact water quality of the waters of Colorado and be in compliance with the Colorado Solid Waste Act and its implementing regulations.

IX.A.5.c. Transport Off Site. Owners or operators shall store the carcasses in a manner to minimize to the greatest extent practicable off-site odor emissions from death of the animal until the carcass is picked up.

IX.A.5.d. Composting. Owners or operators shall put the carcasses in the composter within one (1) day of the death of the animal. The carcasses shall be maintained in a manner to minimize to the greatest extent practicable off-site odor emissions.

IX.A.5.e. Any other disposal method approved by the Division.

#### IX.B. Recommended Specific Odor Control Requirements

The following technologies and work practices are recommended and the Division may require a housed commercial swine feeding operation to employ the following odor control technologies and comply with the following work practices at a minimum for all aspects of the operations, if the Division determines that the housed commercial swine feeding operation must employ such technologies or work practices to comply with the standards in Sections III.A. and III.B., Part B, of this Regulation Number 2.

##### IX.B.1. Swine Confinement Structures

###### IX.B.1.a. Adequate Ventilation

IX.B.1.a.(1) A mechanical ventilation system shall be designed, installed, operated, and maintained to ensure adequate ventilation and efficient air movement to reduce gases and odors, remove moisture, control temperature, and keep the animals clean.

IX.B.1.a.(2) Fresh air intakes for ventilation located away from dust sources and manure pits.

IX.B.1.a.(3) Add-on control equipment installed on all exhaust vents from the confinement structures.

IX.B.1.a.(4) Mechanical underfloor ventilation and add-on control equipment from exhaust vents to the outside.

IX.B.1.b. Dust Management

IX.B.1.b.(1) The use of feed additives and enclosed feeder mechanisms and feed delivery systems.

IX.B.1.c. Manure Management

IX.B.1.c.(1) Manure must be removed from all of surfaces on which manure may collect and on which animals are maintained as frequently as necessary, by flushing or pit recharge using fresh or well treated water, or scraping.

IX.B.1.c.(2) Use of feed management practices, such as phase feeding, amino acid supplemented low protein diets, enzymes, or other feed additives, which reduce the nitrogen content of manure.

IX.B.1.d. Windbreak walls shall be erected downwind from the fans that exhaust air from tunnel-ventilated confinement structures.

IX.B.1.e. Add-on control system shall be installed at each exhaust vent to the outside at confinement structures.

IX.B.2. Solid Waste and Process Wastewater Collection, Storage, and Treatment Systems

IX.B.2.a. The owner or operator shall comply with the following practices during operation of a process wastewater vessel or waste impoundment:

X.B.2.a.(1) Aerobic impoundments shall employ mechanical aerators sized to provide sufficient oxygen to ensure maintenance of aerobic conditions and utilize air or oxygen as defined in this Part B of Regulation Number 2 and mechanically aerated impoundments shall be aerated continuously; and

IX.B.2.a.(2) The removal pumps shall be located as far as possible from the inflow line and above the designed sludge storage volume.

IX.B.2.b. Fill and recharge lines are extended to near the bottom of the pit with an anti-siphon vent and minimizing agitation when pumping liquids.

IX.B.3. Manure Composting Storage Sites

IX.B.3.a. All air collected from the manure compost pile shall be directed to one or more control points for odor reduction using one or more odor control practices defined in Section IV.A.3.e., Part B, of this Regulation Number 2.

IX.B.4. Land Application

IX.B.4.a. All process wastewater, solid wastes, and sludges prior to land application shall be treated as necessary to minimize to the greatest extent practicable off-site odor emissions.

IX.B.4.b. Land applying process wastewater, solid wastes, and sludges may be restricted based upon other factors as necessary to minimize to the greatest extent practicable off-site odor emissions, including but not limited to wind direction, temperature, humidity, and impending rainfall.

IX.B.4.c. The soil shall be tilled prior to and after application of solid wastes or sludges.

IX.B.4.d. All process wastewater disposal operations using pressure spray systems shall meet the following requirements:

IX.B.4.d.(1) The application of extra fine spray shall not occur.

#### IX.B.5. Carcass Disposal

IX.B.5.a. Any odor emissions from any enclosures or covered units or vessels used to store carcasses shall be captured and treated as necessary.

### X. Testing, Recordkeeping, Reporting, and Monitoring Requirements

#### XA. Testing Requirements

X.A.1. Testing requirements apply to all aspects of the housed commercial swine feeding operations and include:

X.A.1.a. Testing for concentration of off-site odor emissions; and

X.A.1.b. Testing for emissions from incinerators if applicable.

X.A.2. At a minimum, an owner or operator shall comply with the following testing requirements:

X.A.2.a. An initial compliance test within one hundred and eighty (180) days after a permit to operate has been issued; and

X.A.2.b. Semi-annual compliance testing beginning within six (6) months of issuance of the permit to operate.

#### X.B. Recordkeeping Requirements

At a minimum, an owner or operator shall comply with the following recordkeeping requirements:

X.B.1. Records of the required monitoring information that includes the following:

X.B.1.a. Date, place as defined in the permit to operate, and time of sampling or measurements;

X.B.1.b. Date(s) on which analyses were performed;

X.B.1.c. The company or entity that performed the analyses;

X.B.1.d. The analytical techniques or methods used;

X.B.1.e. The results of such analysis; and

X.B.2.f. The operating conditions existing at the time of sampling or measurement.

X.B.2. The owner or operator shall record the dates, field locations, wind direction, wind rate, application rate, and the source of the process wastewater, solid waste, or sludge for each land application at the housed commercial swine feeding operation.

X.B.3. The retention of records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. A housed commercial swine feeding operation shall make available for Division review all other records of required monitoring data and support information required to be retained by a housed commercial swine feeding operation upon forty eight (48) hours advance notice by the Division.

#### X.C. Monitoring Requirements

At a minimum, an owner or operator shall comply with the following monitoring requirements:

X.C.1. All odor emissions monitoring and analysis procedures or test methods relied upon in the odor management plan, including any required procedures and methods for compliance certification requirements.

X.C.2. Periodic monitoring sufficient to yield reliable data for the relevant time period that are representative of the housed commercial swine feeding operation's compliance with the permit to operate and odor management plan. Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirements in the permit to operate and odor management plan.

X.C.3. As necessary, requirements concerning the use, maintenance, and where appropriate, installation of monitoring equipment or methods as required by the permit to operate and odor management plan.

#### X.D. Reporting Requirements

At a minimum, an owner or operator shall comply with the following reporting requirements:

X.D.1. Submittal of all reports of any required monitoring at least every six (6) months except as otherwise required on a more frequent basis in the odor management plan.

X.D.2. Prompt reporting of deviations from permit to operate requirements, including those attributable to upset conditions, the probable cause of such deviations, and any corrective actions or preventative measures taken.

### XI. Enforcement

The Division shall enforce the provisions of Regulation Number 2, Part B. The Division may delegate enforcement of the provisions of Regulation Number 2, Part B to any county or regional department of

health. If the Division delegate's enforcement of Regulation Number 2, Part B, the Division shall monitor the actions of any county or regional department of health as such actions pertain to enforcement of Regulation Number 2, Part B.

## XII. Annual Fees

The Division shall assess each housed commercial swine feeding operation an annual fee in accordance with and in the amounts and limits specified in the provisions of the Colorado Revised Statutes Section 25-7-138 (5).

XII.A. This fee shall be based on the working capacity of each housed commercial swine feeding operation.

XII.B. This fee shall be designated to fund and offset the Division's direct and indirect costs of an inspection, complaint response and enforcement program.

XII.C. By mutual agreement, any county or regional department of health that assists in enforcement of this Regulation Number 2, Part B shall receive funding to conduct inspections and respond to complaints.

## XIII. Environmental Leadership Program

### XIII.A. Applicability

The provisions of this Section XI., Part B, of this Regulation Number 2, shall apply statewide to any housed commercial swine feeding operations that voluntarily achieve environmental results that exceed the minimum compliance requirements contained in Part B of this Regulation Number 2, and Water Quality Control Commission Regulation Number 61 concerning the Colorado Discharge Permit System. Additionally, to qualify for the Environmental Leadership Program, a housed commercial swine feeding operation must meet the basic Environmental Leadership Program Elements contained in this Section XI., Part B, of this Regulation Number 2. Participation in the program is voluntary and subject to review every three (3) years by the Department. Applications for the Environmental Leadership Program can be obtained by contacting the Program Administrator, Environmental Leadership Program, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, OPPI A-5, Denver, Colorado 80246-1530; telephone (303) 692-3477.

Contents of the application for Environmental Leadership Program participation are set forth below, as well as regulatory and other incentives that are available to applicants that are chosen to participate. The Executive Director of the Department reviews all completed applications and notifies the applicant in writing of its Environmental Leadership Status. Innovative and creative projects are encouraged, as well as projects that provide significant environmental and community benefits. Applications of chosen entities will be incorporated into written agreements, which will also describe the incentives to be provided by the Department.

If selected to participate in the Environmental Leadership Program, the participant must undertake at least two (2) pollution prevention projects within three (3) years. A low-interest loan from the Environmental Leadership Program Pollution Prevention Revolving Loan Fund may be available.

### XIII.B. Compliance Demonstration

The Environmental Leadership Act limits eligibility to applicants that have an environmental compliance history that is free of serious environmental violations for a period of three (3) years immediately preceding the application date. For applications from existing housed commercial

swine feeding operations that are received on or before July 1, 1999, Leadership status may be granted by July 1, 2000 if no serious environmental violations occur or are discovered during that twelve-month period. If an application is not submitted by July 1, 1999, the applicant must demonstrate the requisite three (3) years without serious environmental violations subsequent to July 1, 1999.

XIII.B.1. The Applicant for Environmental Leadership shall submit, along with the Leadership Application described below, information concerning the environmental history of the past three (3) years of any housed commercial swine feeding operation owned or operated by the applicant, or any other such operation with common ownership in Colorado, including all citations, administrative orders or penalties, civil injunctions or other civil actions, and criminal actions, past, current, and ongoing, taken by any person, agency, or court relating to noncompliance with any environmental law, rule, agency order, or court action in conjunction with the operation of a housed commercial swine feeding operation.

XIII.B.2. The Applicant for Environmental Leadership shall submit information about all environmental awards or citations received or pollution prevention or voluntary remediation efforts undertaken by the Applicant.

#### XI.B.3. Environmental Management System

Applicants must have an Environmental Management System in place and submit the following information in its application:

XIII.B.3.a. All management-approved environmental policies;

XIII.B.3.b. Relevant procedures to achieve and maintain environmental compliance;

XIII.B.3.c. National Pork Producers Council's Environmental Assurance and On-site Odor Assessment Program self-assessment forms (or other comparable assessment performed by independent third parties);

XIII.B.3.d. Proof of employee training program that addresses timely and satisfactory completion of training for employees in the following areas:

XIII.B.3.d.(1) proper operation and management of solid waste and wastewater storage and treatment structures and waste impoundments;

XIII.B.3.d.(2) animal waste management, including land application of waste;

XIII.B.3.d.(3) odor control, including management of buildings, manure, nutrient needs, water and storage facilities, and control equipment;

XIII.b.3.d.(4) water quality protection; and

XIII.b.3.d.(5) proper monitoring, testing, recordkeeping, and reporting requirements concerning environmental laws.

#### XIII.B.4. Pollution Prevention Plan

Applicants must have a pollution prevention plan in place and submit information regarding the pollution prevention plan, which may include but is not limited to:

XIII.B.4.a. Corporate, company, or individual business statement of commitment to pollution prevention, including waste reduction goals, energy and water conservation goals, odor reduction goals, pollutant emissions reduction goals, name of pollution prevention program manager;

XIII.B.4.b. Definition of pollution prevention consistent with the following: source reduction and other practices that reduce or eliminate creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other resources and protection of natural resources by conservation;

XIII.B.4.c. Pollution prevention training for employees and employee recognition program;

XIII.B.4.d. Description of major waste and emission sources or processes at your facility and Existing and new process pollution prevention review procedures;

#### XIII.B.5. Compliance Assurance

XIII.B.5.a. Community outreach efforts and goals;

XIII.B.5.b. Product stewardship/customer and supplier outreach and recognition program; and

XIII.B.5.c. Environmental compliance audit program, including tools and measurements to evaluate compliance with environmental regulations and performance standards, to correct noncompliance within a reasonable period of time, and to report noncompliance as required by law;

XIII.B.5.d. Measurement

Benchmarking/key performance indicators, or existence and maintenance of other verifiable, quantitative and qualitative measures or methods that document resource conservation goals and pollution prevention performance goals.

#### XIII.B.6. Additional Program Elements

In addition to the basic program elements described in XI.B.1. through XI.B.4., Part B, or this Regulation Number 2, Applicants are expected to:

XIII.B.6.a. Take on innovative projects that benefit their operations internally while also serving to provide significant environmental benefits;

XIII.B.6.b. Serve in a mentoring role to other housed commercial swine feeding operations, or establish a network to exchange innovative and/or successful environmental and community projects and ideas; or

XIII.B.6.c. Work with the community in which the operation is located to provide a community concern and response forum and to otherwise to

instill a sense of community responsibility concerning environmental and other issues.

#### XIII.B.7. Elective Program Elements

Innovative and creative projects to meet the above additional program elements are encouraged. These additional program elements can be met either by undertaking new projects or through the enhancing of existing efforts. Examples of additional program elements include:

- XIII.B.7.a. Participation in EPA's AgStar Program;
- XIII.b.7.b. Use of innovative technologies to control odors;
- XIII.B.7.c. Incorporating green building design (energy efficiency and use of natural light ) into structures;
- XIII.B.7.d. Biogas Generation and recovery for energy use; and
- XIII.B.7.e. Setting up a community advisory board.

#### XIII.B.8. Incentives Offered for Participating in the Program

- XIII.B.8.a. Formal public recognition by the governor and the department at least annually to include, but not be limited to:
  - XIII.B.8.a.(1) awards;
  - XIII.B.8.a.(2) public announcements
  - XIII.B.8.a.(3) environmental leadership seal; and
  - XIII.B.8.a.(4) news release.
- XIII.B.8.b. Greater reliance by the department on the entity's self-monitoring, self-reporting, self-certification, or third-party certification to demonstrate compliance with environmental laws and permits, which may result in fewer inspections.
- XIII.B.8.c. Consolidation and simplification of reporting and monitoring requirements and/or fewer reporting and monitoring requirements.
- XIII.B.8.d. Reduced civil penalties in accordance with the EPA and National Pork Producers Council's comprehensive Clean Water Act Compliance Audit Program agreement.
- XIII.B.8.e. Credit for permit fees.

#### XIV. Severability Clause

If any provision of this regulation is found to be invalid by a court of competent jurisdiction, the remaining provisions of the regulation are valid, unless it appears to the court that the valid provisions of the regulation are so essentially and inseparably connected with, and so dependent upon, the void provision that it cannot be presumed the Commission would have enacted the valid provisions without the void one;

or unless the court determines that the valid provisions, standing alone, are incomplete and are incapable of being executed in accordance with the statutory provisions.

## **PART C STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE**

I. Adopted February 19, 1999

### Background

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Section 24-4-103(4), C.R.S. and the Colorado Air Pollution Prevention and Control Act, Sections 25-7-110 and 25-7-110.5, C.R.S.

### Basis

The purpose of this rule revision is to implement Section 25-7-138, C.R.S., which was approved by the electorate on November 3, 1998 and requires the Air Quality Control Commission to promulgate regulations concerning odorous gases and odor emissions from housed commercial swine feeding operations. The rule revisions affect new and existing housed commercial swine feeding operations, including anaerobic process wastewater vessels and impoundments, aerobic impoundments, land waste application sites, and waste impoundments, and require these sources to use technologies to minimize off-site odor emissions from all aspects of housed commercial swine feeding operations, and enforcement provisions.

### Authority

The authority for this regulation is contained in the Colorado Air Pollution Prevention and Control Act ("Colorado Act"), Section 25-7-138, C.R.S. Additional authority to promulgate emission control regulations for housed commercial swine feeding operations is set out in Section 25-7-109(8), C.R.S.

The specific authority to require a construction permit, or "permit to operate", for housed commercial swine feeding operations is set out at Section 25-7-114.2, C.R.S. Such operations are no longer exempt from regulation pursuant to Section 25-7-109(8), C.R.S. The authority to charge a permit processing fee of fifty dollars (\$50.00) per hour is set out at Section 25-7-114.7(2)(a)(III), C.R.S.

The specific authority to promulgate regulations concerning permit applications and procedures to terminate, modify, or revoke or reissue permits is set out at Section 25-7-114.4, C.R.S.

The specific authority to designate which permit applications warrant public comment, and which do not, and the procedures applicable to such public comment, are set out at Section 25-7-114.5, C.R.S.

The statutory authority to provide for public comment on applications for new operations is set out at Section 25-7-106(2), C.R.S. But the process for public comment on the application and on the Division's preliminary analysis set out in Section 25-7-114.5(5), C.R.S., cannot reasonably be applied to existing operations because there is insufficient time to allow for such comments prior to the issuance of permits on July 1, 1999, as contemplated in statute. For existing operations the process of public comment allows for comment on the permit applications and not the draft permits. Such procedure is promulgated under the Commission's general authority to receive comments before taking agency action, and on its authority under Section 25-7-106(2), C.R.S.

### Purpose

The citizens of Colorado have approved an amendment to the Colorado Act requiring the Commission to develop regulations to minimize odor emissions from housed commercial swine feeding operations. The purpose of the regulations is to minimize odor emissions from affected sources to the greatest extent

practicable. The Commission finds that the regulatory revisions contained in Regulation Number 2, Part B are necessary to minimize odor emissions from housed commercial swine feeding operations in the State of Colorado.

The regulation requires housed commercial swine feeding operations to employ technology to minimize to the greatest extent practicable off-site odor emissions from all aspects of their operations.

The Commission concludes that the adoption of these regulatory revisions is an appropriate step to minimize odor emissions from housed commercial swine feeding operations.

### **Applicability**

A party has stated that the Commission should consider a de minimis exemption for sources with no odor impact on receptors due to distance of operations from permanent receptor (3,000 feet away). The Commission disagrees that the text of Amendment 14 allows de minimis exemptions to the cover requirement for anaerobic impoundments. Amendment 14 requires that anaerobic process wastewater vessels and impoundments be covered so as to minimize the emission of odorous gases to the "greatest extent practicable;" it does not tie this requirement to "off-site" emissions and does not provide for exceptions if neighbors do not live within a specified distance of the operation.

To the extent that parties assert that distance from receptors should exclude or excuse them from having to comply with technology or odor standards, the Commission has determined that Amendment 14 establishes a requirement to minimize odorous gases to the atmosphere from anaerobic process wastewater vessels and impoundments and aerobic impoundments and a technology standard at the property line for all aspects of the operations.

### **Definitions**

The Commission did not define any terms that are otherwise defined in the Common Provisions. The Commission has attempted to ensure that definitions common to the Water Quality Control Commission's regulation (site regulation) and the Commission's regulation concerning housed commercial swine feeding operations are consistent.

The regulation includes definitions for several terms also defined in the statute. The statutory definitions of "aerobic", "anaerobic", "housed commercial swine feeding operation", and "housed swine feeding operation" appear verbatim in the regulation. The Commission clarified certain statutory definitions by defining terms used within the statutory definitions of "aerobic" and "housed commercial swine feeding operation."

The phrase "capable of housing" is defined and clarified to refer to the combined maximum capacities of individual housing units. The Commission intends this capacity to be based on the sum of the weights of swine anticipated to be present in all housing units at any one time, e.g., based on the business plan for the operation. That is, the capacity determination is based on full use of existing physical facilities, consistent with standard industry practices aimed at providing a continuous supply of marketable hogs. If the owner demonstrates that standard practice results in swine at a variety of weights being present at any one time, the combined total of those various weights at the time of maximum utilization is to be used. The Commission does not believe that the proposal to allow a determination that an operation may be excluded from the definition, based on a commitment not to house more than a specified weight, is consistent with the statutory language, which is based on what an operation is "capable of housing", not on actual operations that may be at a lower level.

The definition includes default values to correlate the statutory 800,000 pounds threshold with different size categories of swine. However, the definition also allows the owner of an operation to provide specific information that demonstrates the appropriateness of an alternative capacity calculation for a particular

facility. The Commission intends these elements of the definition to provide predictability and ease of application in most circumstances, while also providing flexibility to address any unique circumstances.

The regulation defines the phrase “under common or affiliated ownership or management” which is used in the definition of “housed commercial swine feeding operation”, by focusing on majority ownership or actual or effective control of the management of those aspects of an operation related to swine production or swine waste management. The Commission does not intend that mere similarity of practices, such as utilizing the same university feeding recommendations or local veterinarian or the same feed manufacturer alone evidence “effective control of the management” of operations. Moreover, limited cooperative efforts, such as the participation in a common marketing organization or a commitment by multiple producers to meet common product standards (e.g., for organic pork) alone, without more extensive control of other aspects of swine production or waste management, would not constitute “effective control of the management” of an operation, so long as no entity has the ability to require such participation. The Commission anticipates that application of this definition will require the Division to exercise its judgment on a case-by-case basis to determine what circumstances do or do not evidence “effective control”, e.g., based on actual decision-making authority or dominant market position. All possible circumstances and arrangements cannot be anticipated in this regulation.

There were issues concerning the appropriate application of the housed commercial swine feeding operation definition in one specific type of arrangement: where a contract finisher would not meet the definition of “common or affiliated ownership or management” except that it does not own in total the swine that it finishes; instead, it finishes swine pursuant to a contract with an agricultural cooperative or corporation. The Commission believes that new operations that are involved in this type of arrangement fall under the statutory “common or affiliated ownership or management”. The Commission believes that new operations that are involved in this type of arrangement fall under the statutory “common or affiliated ownership or management” language and that, if they also meet one of the tests in the definition relating to water quality or air quality impacts, excluding those operations would be inconsistent with the requirements of the statute. The interdependency among the various phases of swine production -- farrowing, finishing and processing -- for these arrangements does not appear to be substantially different from that associated with a single corporate operation.

Many of the existing operations, however, are family farms that have added housed swine facilities within the last several years pursuant to a contract with an agricultural cooperative. The Commission recognizes that these cooperative contract operations face a substantial financial and management challenge to come into compliance with the requirements of Amendment 14, especially considering the cumulative air and water quality requirements. Therefore, the Commission has provided a ten year deferral period for the existing contract producers that meet the definition of a housed commercial swine feeding operation. During this ten year deferral period, the Commission directs the Division to carefully monitor the eight to ten existing operations to determine whether these operations should be regulated under this rule due to their adverse impacts on air quality. The Division shall report back to the Commission at the end of five years to recommend whether the deferral should be made permanent. The deferral does not apply to operations that have been designated under local zoning or land use regulations as commercial operations. The Commission is not providing the ten year deferral to new operations that commenced construction on or after November 3, 1998 and that are contract producers for agricultural cooperatives that meet the definition of housed commercial swine feeding operation. This is done, in part, to avert the potential for large vertically integrated swine producers to reorganize in order to rely upon contract producers to produce large numbers of swine in a relatively small area with the attendant risks to air quality that might flow from such agreements.

The Commission has defined the phrase “integrated in any way” as referring to a potential measurable cumulative impact on state waters or air quality in any one location. The Commission intends that this potential is to be determined based on the location of the facilities, not on operational controls. If this phrase were interpreted to refer solely to integration of business operations, it would be duplicative of the phrase “common or affiliated ownership or management,” which would render the other phrases in the second half of the sentence in the statutory definition of “housed commercial swine feeding operations” irrelevant.

The statute defined “process wastewater” and the Water Quality Control Commission revised that definition to be “swine feeding process wastewater”, since the water discharge permit regulation as a whole applies to many other types of process wastewater. To be consistent, the Commission has likewise used the term “swine feeding process wastewater.” The Water Quality Control Commission modified the definition to clarify the intent that it apply to wastewater resulting from the swine feeding and wastewater management aspects of a housed commercial swine feeding operation.

In addition to the statutorily defined terms and the terms to clarify those terms, the Commission included several additional definitions to provide clarity regarding implementation of this new regulatory program. The Commission added definitions of “new” and “existing” housed commercial swine feeding operations as is consistent with the statute. The definitions hinge on whether the owner or operator “commenced construction” by March 30, 1999, the anticipated effective date of this amendment to Regulation Number 2. Typically, the date selected for existing sources in air quality regulations is either the date of the proposal of the regulation or the effective date of the regulation. The Commission chose the effective date of the regulation. The phrase “commence construction” is defined in the Commission’s Common Provisions. New and existing operations are to be distinguished from the definition of “new land application sites” and “new waste impoundments” concerning the statutory setback requirements.

The Commission included a definition of “aquifer”, since the term is used in the statute and the regulation. This definition tracks the definition of this term in Colorado statutes for ground water management.

The Commission included a definition of the term “cover” to clarify the statutory requirement that all anaerobic process wastewater vessels and impoundments, including but not limited to treatment and storage lagoons, shall be covered so as to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases to the atmosphere (Sections 25-7-138(1) and (2), C.R.S.). The Commission has defined a cover to mean a device, technology, or material that encompasses the entire surface area of the vessels or impoundments. The cover must encompass the entire surface area so as to properly capture, recover, incinerate, or otherwise manage odorous gases. The owner or operator must minimize odorous gases emitted from the vessels or impoundments, in addition to minimizing off-site odor emissions from other operations and activities at the housed commercial swine feeding operation.

The Commission has defined “land application” to clarify that land application includes the applying of waste for purposes of treatment or storage. The definitions generally track the Water Quality Control Commission’s existing definition of land application with a few modifications. The Commission defined “manure”, “open animal feeding operation”, “waste impoundment”, and “watershed” to be consistent with the Water Quality Control Commission’s definitions of those terms. A party requested that the Commission exclude “evaporation ponds” from the definition of waste impoundment. The Commission determined that since evaporation ponds are either anaerobic or aerobic and can be considered impoundments, the statute intended to include evaporation ponds in the requirements for anaerobic and aerobic impoundments.

The Commission defined “permit to operate” to clarify that it is a construction permit. The phrase “process wastewater vessel” was defined because it is used in the statute and to clarify the difference between such vessels and waste impoundments. The Commission intends the definitions of waste impoundment and process wastewater vessel to encompass all manure and wastewater treatment and storage devices, technologies, or methods used by housed commercial swine feeding operations.

One of the parties to the rulemaking expressed concern that the definitions of “process wastewater vessel” and “waste impoundments” may not capture all waste storage and treatment facilities. The Commission intends the definitions of “process wastewater vessel” and “waste impoundment” to include all types of storage and treatment facilities at such affected operations.

The Commission defined “utilizes air or oxygen” because it is the key component of the statutory definition of “aerobic”. There are two parts to the definition: (1) a waste treatment method that utilizes air or oxygen at a minimum of one part per million of dissolved oxygen throughout the liquid column; or (2) a

waste treatment method that is designed to meet the oxygen demand of the waste loading. The first requirement of one part per million dissolved oxygen is consistent with generally accepted municipal wastewater treatment standards and is intended as a default standard where the owner or operator does not or cannot make the necessary demonstration under part (2) of this definition. The second requirement is based upon recommendations and research by the Water Quality Control Division. The Commission did not tie the definition of utilizes air or oxygen with the odor concentration standards in the regulation for several reasons. First, an aerobic condition is not directly linked to odor control, but to scientific and technical conditions. Second, the odor concentration standards are intended to measure off-site odor emissions and the requirements concerning anaerobic and aerobic vessels and impoundments are not tied to off-site odor emissions, but simply require the operation to minimize the emission of odorous gases to the atmosphere.

The determination of an aerobic lagoon includes the factors of lagoon surface area, depth of the lagoon, distribution of influent, loading rate of the influent, and maintenance to maximize the performance of the lagoon. The influent loading rate has to match the lagoon aeration potential (surface area and/or supplemental aeration). In calculating the organic oxygen demand, we will assume a reoxygenation rate of 50 pounds of biological oxygen demand (BOD) per acre per day of surface area as a guide.

## Standards

Sections III.A. and III.B. of the regulation establish odor standards that must be met at or beyond the property boundary, and at occupied dwellings, schools, places of business, and municipal boundaries.

The dilution standard of 7:1 established in Section III.A. applies at and beyond the operation boundary, and may be monitored by the owner or operator within the property boundaries of the operation. The dilution standard of 2:1 established in III.B. applies at any receptor. In implementing III.B., the Division should not enter private property for the purpose of applying the dilution standard of 2:1 without permission from someone with actual or apparent control over such property. The Commission has determined that a "place of business" means the fixed location for the business and the immediate area around the fixed location. The Commission understands that odor easements have been and may be obtained by operations. The property boundary of any operation shall include the legal property boundary of the parcels owned by the housed commercial swine feeding operation and any easements on adjacent properties that have been granted to the operation.

The Commission has required the dilution standard of 7:1 at the property boundary based on the experience of the Division's inspectors as well as testimony of some of the affected operations that this standard is reasonably attainable. The Commission believes that a property boundary standard of 2:1 is probably not a practicable standard for minimizing odors at the property boundary. But, that standard should apply to the nearest receptor because of the statutory requirement of minimizing off-site odor emissions to the greatest extent practicable. Some parties expressed concern that these standards are inappropriate because the standards are more stringent than the standard for urban areas (residential and industrial). In general, such operations are located in rural areas. The Commission interprets Amendment 14 to require a rigorous regulatory scheme for the control of odors from housed commercial swine feeding operations and to substantially eliminate the nuisance nature of these odors (see Section 1. Amendment 14). Thus, a protective receptor standard is deemed appropriate.

The Commission determined that the standards of 15:1 and 127:1 at the property boundary are not sufficient to meet the statutory standard. Amendment 14 specifically states that housed commercial swine feeding operations must minimize odor emissions to the greatest extent practicable which the Commission interprets as a more stringent requirement than the existing statutory authority for Regulation Number 2's odor standards for other sources. Amendment 14 does not provide the Commission with the authority to impose comparable odor standards for any other agricultural sources in Colorado other than housed commercial swine feeding operations.

The standards must be applied in conjunction with the requirement to employ technology to minimize to the greatest extent practicable off-site odor emissions from all aspects of the operations of a housed

commercial swine feeding operation. The Division may determine that an operation is not employing the appropriate technology even if the operation can demonstrate compliance with the odor concentration standards and will then incorporate such technology in the permit or odor management plan.

The Commission understands that measuring odor concentration is only one of the various aspects of detecting odor. But the Commission selected odor concentration standards because the Division has experience with implementing and enforcing this standard and this form of odor measurement is generally accepted in the field of odor measurement.

The Commission elected not to rely upon a complaint-based program, because the statute does not appear to so limit the Commission or the Division in implementing and enforcing the statute. In addition, each individual is entitled to the protection of the standards and enforcement should not depend on the number or verification of complaints. The Commission determined that the statute requires, at a minimum, the property boundary as the appropriate place to apply the standard.

Several parties argued for a safe harbor provision in the regulation, which would preclude an enforcement action for operating in excess of the odor concentration standards in the event that an operation successfully asserted that it was employing all technologies to minimize to the greatest extent practicable odor emissions. The Commission has determined that this is not a likely scenario. Like all other sources subject to air quality regulation, standards independent of technology requirements are established and sources must determine for themselves how to comply. This is the reason that the Commission has chosen to adopt a flexible approach to the specific odor control requirements. At time such compliance may require modification of the operations. In the unlikely event that the suggested scenario occurs in the future, the Commission can entertain an appropriate revision to the regulation.

C.A.R.E., a party to the hearing, refers the Commission to a process established in Northeast Metro Denver for the voluntary control of odors; indeed, in Northeast Metro Denver the Division and several industries have entered into a memorandum of understanding that allows the Division to forego its enforcement authority if, upon receiving one or more odor complaints, the offending industry agrees to and does implement a prompt odor abatement project that must include, among other things, a citizen input component. The Division has stated that it is a process that has worked well and could be considered in the future for housed commercial swine feeding operations outside of the regulatory scheme and in the Division's enforcement discretion.

### **Process Wastewater Vessels and Impoundments**

The statute requires affected operations to cover existing, new, and expanded anaerobic process wastewater vessels and impoundments so as to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases to the atmosphere. The cover must encompass the entire surface area of the vessel or impoundment and there must be no uncontrolled vents.

The Commission has included several approved covers that operations may employ. Covers were deemed approved if the technology was generally accepted by other states and in university studies to effectively minimize the emission of odorous gases. Alternative covers may be employed if the owner or operator can demonstrate that the alternative is of comparable effectiveness to the approved covers. Such a demonstration can include studies or research from universities or other states concerning the effectiveness of the device or technology. Alternative covers can include synthetic covers of variable densities and thicknesses and aerobic covers less than three feet in depth if the owner or operator can make the necessary demonstrations.

Experimental covers may be employed by operations and the operation must demonstrate that the experimental cover is as effective in minimizing the emission of odorous gases as approved covers within one hundred and eighty (180) days of the issuance of the permit to operate. This provides operations a period of time to install experimental covers and test the covers for effectiveness. Certain parties requested that the Commission consider defining an aerobic cover such that it meets the off-site odor

emission standard. Again, the requirement to cover anaerobic process wastewater vessels and impoundments is not linked to off-site odor emissions, but to minimizing the emission of odorous gases to the atmosphere. The Commission believes that biocovers are of limited effectiveness and has required that biocovers must cover the entire surface area of the vessel or impoundment.

Several parties have stated that the cover requirement should be applicable only if there are odors from the process in violation of the odor concentration standards, because the covers are expensive and unnecessary if the process generates no odors. Parties believe that the Commission should allow technologies or systems that effectively manage odor to be used if they already meet odor concentration standard. The Commission interprets the statute to require a cover if an anaerobic process wastewater vessel or impoundment is utilized and the requirement does not appear to be connected to any particular standard, other than the requirement to minimize to the greatest extent practicable the emission of odorous gases. Anaerobic treatment systems are commonly used today and the Division believes that the statute specifically covers both storage and treatment impoundments in the plain language of the cover requirement. In addition, the requirement to cover anaerobic process wastewater vessels and impoundments is not tied to the requirement to minimize off-site odor emissions. Instead, operators are required to minimize to the greatest extent practicable the emission of odorous gases to the atmosphere.

Other parties requested that the Commission not prescribe technologies to meet the cover requirement, but be as flexible as possible in allowing alternative technologies to minimize odor emissions and meet the odor standards. The Commission believes that in allowing for alternative and experimental covers it is providing the necessary flexibility for odor control in a manner that is consistent with the statute.

Aerobic impoundments must be operated to ensure maintenance of aerobic conditions or to otherwise minimize the emission of odorous gases to the atmosphere. The Commission has defined "aerobic" to be consistent with the statutory definition and defined "utilizes air or oxygen" as maintaining 1 ppm of dissolved oxygen throughout the column (an accepted standard for municipal wastewater impoundments) or a waste treatment method that is designed to meet the oxygen demand of the waste loading (as recommended by the Water Quality Control Division).

### **Air Quality Setback Measurements and Waivers**

The Commission included the statutory requirements concerning one mile air quality setbacks for new land waste application sites and new waste impoundments. The statute defines "new" for this section to mean in use as of June 1, 1998. The statute contemplates allowance for waivers of these setback requirements and the Commission has included procedures and requirements for obtaining waivers in the regulation. Waivers must be recorded with the county clerk of the county where the affected property is located.

Parties have argued that the Commission should consider any new land application sites that are acquired as a means to comply with this regulation as existing land application sites. Whether a land application site or waste impoundment is considered "new" is driven by statutory dates. Consequently, whether a housed commercial swine feeding operation is new or existing under this regulation is irrelevant to consideration of the air quality setback requirement for land application sites and waste impoundments.

### **Permit to Operate**

The Commission has determined that to effectively enforce the provisions of Section 25-7-138, C.R.S. and Part B of Regulation Number 2, a permit to operate is required. A permit to operate is a construction permit. The Commission has statutory authority to require construction permits for such sources pursuant to Section 25-7-114.2, C.R.S.

The statute requires existing sources to be in compliance with the Commission's regulation and with the statutory technology requirements by July 1, 1999. In order to comply with this ambitious deadline, the

Commission established a permitting structure that requires submission of initial permit applications by existing facilities by April 15, 1999, and contemplates issuance of the permits for existing sources by July 1, 1999. Although the April 15, 1999 deadline is a little more than two weeks after the legal effective date of these new regulatory provisions, the Commission understands that the application forms for existing facilities will be available shortly after the Commission takes final action in this rulemaking.

Affected operations must submit an odor management plan along with the permit application on April 15, 1999 pursuant to the Commission's authority in Section 25-7-138(3), C.R.S. The odor management plan is an enforceable part of the permit to operate and shall include technologies and work practices not required as conditions in the permit.

The Commission has included in the regulation an opportunity for public review and comment for the permit applications and odor management plans. For existing operations, the public review and comment period occurs from April 15, 1999 to May 15, 1999. Existing operations are required to submit a copy of the application and odor management plan to the Division, the county clerk's office and local or regional health department for the county(ies) in which the operation is located in by April 15, 1999. Parties to the hearing have requested that the Commission allow for public hearings. Given the tight time frame to consider and issue these permits and given the significant resource demands of preparing for and conducting such hearings, the Commission has determined that a public hearing opportunity on each permit cannot be accommodated.

The Commission has determined that the annual fee of \$0.20 per swine to offset the costs of administering the housed commercial swine feeding operation program for the Water Quality Control Division included in the amendment to Section 25-8-501.1, C.R.S. was not intended to offset the costs of the Division's costs of administering the program. Operations are required to pay a permit processing fee of \$50.00 per hour of a permit engineer's time to process the permit and a \$100.00 application fee. The additional costs of administering the program must be funded separately.

The regulation also includes requirements concerning modification of permits to operate if the operation is modified pursuant to the Commission's authority in Section 25-7-114.2, C.R.S., including increasing the number of animals at the operation. An operation shall be permitted to operate with a maximum number of animals. If the operation wishes to increase the maximum number of animals, it must request a permit modification. The sources of odor at a housed commercial swine feeding operation are directly linked to the number of animals at the operation. As the number of animals increase, the amount of animal waste increases inside the confinement structure, being loaded into storage and treatment vessels and impoundments, and being disposed of through land application, composting, etc. Therefore, the permit conditions and odor management plan may need to be revised if the number of animals at an operation increases. In addition, if the type of feed for the animals changes then a permit modification is necessary. Experts in the industry agree that the type of feed provided the animals can increase or decrease the amount of waste generated at an operation and, therefore, modify the waste management needs of an affected operation.

An operation that operates an incinerator or combustor must obtain a separate construction permit for those sources and is subject to any other applicable Commission regulations.

Several parties to the hearing recommended that the Commission require that affected operations submit Air Pollutant Emission Notices and pay the necessary air pollutant emission fees. The Commission considered requiring APENs for odor emissions from these operations. The only reportable emission related to odor is hydrogen sulfide, which is a criteria pollutant. Hydrogen sulfide is emitted primarily from the anaerobic processes. In order to determine the amount of hydrogen sulfide being emitted, the operation would have to use a Jerome meter, which is very costly. According to other states, the typical hydrogen sulfide emissions from these sources amount to about 2 to 8 tons per year. The Commission has elected not to require APENs or the related fees at this time, but may consider this issue if this regulation is revised in the future.

### **Specific Odor Control Requirements**

There are several primary sources of odor at a housed commercial swine feeding operation: confinement structures, manure storage and treatment, waste disposal including land application, and carcass disposal. The Commission intends the specific odor control requirements in Section IX., Part B, of Regulation Number 2 to be included in the odor management plan.

The Commission has divided the specific odor control requirements into mandatory and recommended requirements. The mandatory requirements are limited to those work practices and technologies that appear to be effective and commonly utilized to minimize odor emissions throughout the industry. Rather than requiring numerous prescriptive technologies and potentially limit the use of new and innovative technologies, the Commission has allowed flexibility for sources. If an operation cannot demonstrate or maintain compliance with the mandatory and source-selected work practices and technologies or the Division believes that an operation will require additional work practices or technologies during the permit processing period, then the operation may be required to employ additional work practices and technologies including those in the recommended technologies.

Odor management plans must include the applicable mandatory requirements as well as any additional work practices or technologies necessary so that the operation employs technology to minimize to the greatest extent practicable off-site odor emissions from all aspects of its operations, including but not limited to odor from the operation's swine confinement structures, manure and composting storage sites, animal carcass disposal, and odor and aerosol drift from land application equipment and sites.

Parties to the hearing raised several issues concerning mandatory land application requirements, including issues concerning restrictions on when and how the waste is land applied. Land application of process wastewater raises a substantial possibility of significant odor emissions when the application is to frozen, saturated or snow-covered ground or the waste is allowed to pond on the surface. Increased volatilization and evaporation cause greater emissions under these conditions. In addition, untreated process wastewater often results in increased odors compared to pretreated process wastewater. Accordingly, the regulation prohibits land application when the ground is saturated or snow covered or ponding has occurred and requires pretreatment of process wastewater unless the land application is accomplished through injection of the wastewater. Land application of solids and sludges requires the material be pretreated and injected or incorporated into the soil within six hours of application.

The National Pork Producers Council recommends that land application not occur on weekends or holidays to minimize the nuisance impact of odors to neighbors when they are most likely to be home and/or in and around their home. The Commission adopted this practice as a mandatory requirement. Also, land application of process wastewater should only occur when wind conditions are such that off-site transport of the odorous wastewater is minimized. Low pressure sprays are required, unless a waiver is granted, to minimize the off-site transfer of fine mist spray. A waiver for land application on holidays or weekends is allowed if an emergency occurs (i.e., overflow of impoundments).

Another party requested that the Commission require low trajectory systems "utilizing drop nozzles" to prevent evaporation and the low trajectory systems should be two to three feet above ground. On the other side, a party requested that the Commission not specify the pressure if the owner or operator can demonstrate compliance with the standard using a different pressure. The Commission intends "system operating pressure" to include the nozzle discharge and the requirement to reduce the fine spray during land application. The Commission does not want to mandate "drop nozzles" when the technology may change and some other technology may be as or more effective. The Commission did not clarify the height of the trajectory system in the regulation, but it will be discussed in the Division's guidance document and particular height will be included in the permit to operate for affected operations. The Commission allows for a waiver from the requirement for a specific pressure of twenty (20) psi if the operation can demonstrate compliance using a different system pressure.

Housed commercial swine feeding operations often contract with neighboring farmers for land applying the process wastewater and manure for fertilizing crops. The regulation contemplates such an agreement. The owner or operator of the housed commercial swine feeding operation is responsible for

assuring that the requirements of this regulation are met on those lands owned by a third party. This includes, but is not limited to, the setback requirements and the land application requirements.

The Division may require specific technologies and work practices in addition to the mandatory technologies and work practices be included in a permit to operate to minimize off-site odor emissions to the greatest extent practicable for both new and existing operations. Such recommended requirements could include, but not be limited to, add-on control equipment for swine confinement structures, composting storage sites, and carcass disposal vessels. These additional recommended requirements may be added as permit conditions if there is evidence of exceedences of the odor standard.

### **Testing, Recordkeeping, Monitoring, and Reporting Requirements**

The regulation includes testing, recordkeeping, monitoring, and reporting requirements to aid in determining whether an operation is in compliance with the odor concentration standards, has employed the necessary technology and work practices, and is properly maintaining the necessary technology. An operation must conduct initial testing and semi-annual testing. An operation must modify its permit to operate and/or odor management plan as necessary if it cannot demonstrate compliance with the odor concentration standards.

### **Environmental Leadership Program**

The regulation includes the first regulatory provisions implementing the Environmental Leadership Program. This program is intended to apply only to housed commercial swine feeding operations and not other third parties associated with such operations, for example, manufacturers, suppliers, and consultants. The Commission intends for the Environmental Leadership Program of the Colorado Department of Public Health and Environment to implement this program with input from the Division. Any operation approved as a leader, must still comply with the substantive requirements of Regulation Number 2, including the cover requirement for anaerobic process wastewater vessels and impoundments if applicable.

### **Coordination with Water Quality Control Division**

Amendment 14 establishes both water quality and air quality protection requirements. In developing the air quality program for housed commercial swine feeding operations, the Commission attempted to coordinate these requirements to the maximum degree possible with the new requirements being developed by the Water Quality Control Commission. Such coordination will best serve the interests of the regulated community, the general public, and the implementing agencies. In particular, the Commission adopted definitions that are also proposed as part of the new water quality regulations for housed commercial swine feeding operations and established application deadlines consistent with those proposed for water quality, to maximize the coordination of permit application review and permit issuance. In addition, the Division and the Water Quality Control Division will be issuing multi-media permits to these sources. The two parts to the permits are issued under separate statutory authority and there is no requirement that the air quality permit be renewed every five years as is required for the water quality permit.

### **Economic Issues**

Concern was expressed by parties to the hearing regarding the costs of complying with the new requirements established for housed commercial swine feeding operations. A wide range of potential cost estimates was provided. The Commission attempted to adopt regulatory requirements that are as economically reasonable as possible, consistent with the specific requirements of Amendment 14. Where the statute provided room for flexibility, the Commission included flexibility with respect to implementation of specific aspects of the program, to the degree that it believes is consistent with meeting the intent expressed in the legislative declaration of Amendment 14, and keeping in mind the need to establish a program that will be feasible for the Division to implement with the available resources. The Commission

does not believe that the proposal from some parties to include a general waiver provision that would apply to all aspects of the housed commercial swine feeding operations program is appropriate, in view of the explicit intent and requirements of the statute.

Parties were divided over whether or not costs should be considered in determining what technologies should be required to meet the requirement to minimize to the greatest extent practicable odor emissions. The Commission chose to consider the comparative costs of technologies for the cover requirement and other various odor sources. Each technology meets the standard of minimizing emissions to the greatest extent practicable. Having adopted the technology requirements as meeting the operative standard, it is not the Commission's intent to excuse any operation from the requirement to employ such technology based on the economic burden or cost to the operation.

### **Enforcement Issues**

The Commission has not included a requested "notice of intent to sue" provision in the regulation, with respect to the provision in Amendment 14 allowing civil actions for enforcement to be brought by any person who may be adversely affected by a housed commercial swine feeding operation. This statutory provision is self-implementing. As an administrative agency, the Commission is without authority to impose procedures related to the filing or conduct of district court actions.

The Commission notes that there is an understanding between the Division and local health agencies to coordinate the implementation and enforcement of the housed commercial swine feeding operation program to the greatest extent feasible in view of resources available to both state and local governments. The Commission does not believe it is necessary or appropriate to attempt to specify the details of this relationship in the regulation. But the Commission believes that such a cooperative effort will strengthen the efficiency and effectiveness of this program. In particular, the Commission encourages the Division to seek local health agency assistance in implementation efforts in the field, such as conducting inspections for purposes of compliance assurance or in response to site-specific complaints.

### **Federal Requirements**

The rule revisions required by Section 25-7-138, C.R.S., are state-only regulations, are not required by the provisions of the federal act, and are otherwise more stringent than the requirements of the federal act. Such rule revisions have not been adopted for inclusion in the State Implementation Plan.

### **Determinations Required by Section 25-7-110.8, C.R.S.**

Pursuant to Section 25-7-110.8, C.R.S., the Commission hereby determines that:

The regulations for housed commercial swine feeding operations are based on reasonably available, validated, reviewed, and sound scientific methodologies. all validated, reviewed, and sound scientific methodologies and information made available by interested parties have been considered.

Based on Evidence in the record, the Commission finds that the rule shall result in a demonstrable reduction in odor emissions from housed commercial swine feeding operations.

The Commission chose the regulatory alternative that complied with the requirements of Section 25-7-138, C.R.S., in the most cost-effective manner and in a manner that provides the regulated community flexibility.

The regulatory alternative selected by the Commission will maximize the air quality benefits pursuant to Section 25-7-138 in the most cost-effective manner.

COLORADO AIR QUALITY CONTROL COMMISSION

ADOPTED: February 19, 1999

II. Adopted December 14, 2006

### Background

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedures Act, Section 24-4-103(4), C.R.S. and the Colorado Air Pollution Prevention and Control Act, Sections 25-7-110 and 25-7-110.5, C.R.S.

### Basis

Regulation Number 2, Part B contains odor standards, technology requirements for process wastewater vessels and impoundments, setback requirements for new land waste application sites or impoundments, and requirements for permitting, odor management plans, testing, recordkeeping, reporting and monitoring for housed commercial swine feeding operations. The purpose of this rule revision is to implement into the existing requirements of Regulation Number 2, Part B statutory revisions to Section 25-7-138, C.R.S., approved by the General Assembly through Senate Bill (SB) 06-114, Concerning the Expansion of Anaerobic Controls to Allow Additional Technologies to be used in the Operation of Housed Commercial Swine Feeding Operations, and Making an Appropriation in Connection Therewith, signed by the Governor on May 25, 2006 and summarized below. SB 06-114:

1. Allows anaerobic process wastewater vessels and impoundments used in connection with a housed commercial swine feeding operation to be operated with technologies or practices that are as effective as covers at minimizing odor from the operation, to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere.
2. Requires a housed commercial swine feeding operation to submit to the Division information sufficient to demonstrate that the technologies or practices used are as effective as covers at minimizing odor from the operation.
3. Requires a housed commercial swine feeding operation to manage odor emissions such that odor emissions from the operation:  
  
Cannot be detected at or beyond the property boundary after the odorous air has been diluted with seven volumes of odor-free air; and  
  
Cannot be detected at any off-site receptor (defined as any occupied dwelling used as a primary dwelling or its curtilage, a public or private school, or a place of business) after the odorous air has been diluted with two volumes of odor-free air.
4. Allows the Division to delegate enforcement of Regulation Number 2, Part B to any county or regional department of health.
5. Establishes a fee to offset the direct and indirect costs of enforcement, compliance, and regulation of odor emissions for the Division.
6. Creates the housed commercial swine feeding operation fund for the deposit of such fees and for the support of enforcement activities.
7. Appropriates \$52,312 and 0.5 FTE to the Department of Public Health and Environment, and \$4,834 to the Department of Law for the fiscal year July 2006 – June 2007, for the implementation of the act.

### Specific Statutory Authority

The authority for this regulation is contained in the Colorado Air Pollution Prevention and Control Act ("Colorado Act"), Section 25-7-138, C.R.S. Additional authority to promulgate emission control regulations for housed commercial swine feeding operations is set out in Section 25-7-109(8), C.R.S.

The above fee does not modify the Division's authority to assess permit processing fees, pursuant to Section 25-7-114.7(2)(a)(III), C.R.S.

### Purpose

The General Assembly modified Section 25-7-138, C.R.S., to: allow all existing, new or expanded anaerobic process wastewater vessels and impoundments used in connection with a housed commercial swine feeding operation to be operated with technologies or practices that are as effective as covers at minimizing odor from the operation, to capture, recover, incinerate, or otherwise manage odorous gases to minimize, to the greatest extent practicable, the emission of such gases into the atmosphere; require a housed commercial swine feeding operation to submit to the Division information sufficient to demonstrate that the technologies or practices used are as effective as covers at minimizing odor from the operation; require a housed commercial swine feeding operation to manage odor emissions such that odor emissions from the operation cannot be detected at or beyond the property boundary after the odorous air has been diluted with seven volumes of odor-free air and at any off-site receptor (defined as any occupied dwelling used as a primary dwelling or its curtilage, a public or private school, or a place of business) after the odorous air has been diluted with two volumes of odor-free air; allow the Division to delegate enforcement of the requirements of Regulation Number 2, Part B to any county or regional department of health; allow the Division to assess an annual fee, not to exceed seven cents per animal based on the working capacity of each housed commercial swine feeding operation to offset the costs of enforcement, compliance and regulation of Regulation Number 2, Part B; and, establish a fund for the purposes of enforcement, compliance and regulation, including reimbursement to local and regional health departments for assistance in of enforcement activities.

The Commission finds that the regulatory revisions contained in Regulation Number 2, Part B are necessary to minimize odor emissions from housed commercial swine feeding operations in the State of Colorado. The Commission concludes that the adoption of these regulatory revisions is an appropriate step to minimize odor emissions from housed commercial swine feeding operations.

### **Summary of Provisions**

#### **Applicability**

The Commission concludes that applicability of this regulation has not been modified pursuant to SB 06-114.

#### **Definitions**

The Commission added three new definitions to Regulation Number 2, Part B., Section II. - Division; receptor and working capacity. The Commission clarified the definition of "Division" to specifically designate the Division as the Division of Administration of the Colorado Department of Public Health and Environment as it pertains to implementation of Regulation Number 2, Part B and not as defined in the Commission's Common Provisions Regulation. The term "receptor" was deleted from Section III.B.1., and added verbatim in the definition section of the regulation because the term was deemed more appropriate in the definition section of the regulation. To help clarify how annual fees are determined by the Division, the Commission incorporated the definition of "working capacity" from SB 06-114(5).

#### **Odor Standards**

The Commission has determined that SB 06-114 establishes a requirement to minimize odorous gases to the atmosphere from anaerobic process wastewater vessels and impoundments such that odor emissions from the operation cannot be detected at or beyond the property boundary after the odorous air has been diluted with seven volumes of odor-free air and at any off-site receptor after the odorous air has been diluted with two volumes of odor-free air. The Commission has determined that this requirement is met by the existing regulatory requirement in Sections III.A. and III.B of Regulation Number 2, Part B.

The Commission established the dilution standard of 7:1 at the property boundary based on the experience of the Air Pollution Control Division's inspectors as well as testimony of some of the affected operations that this standard is reasonably attainable during the original rulemaking process held in 1999. At that time, the Commission held that a property boundary standard of 2:1 is not a practicable standard for minimizing odors at the property boundary, but does maintain a higher standard for minimizing off-site odor emissions to the greatest extent practicable and should therefore apply to off-site receptors. SB 06-114 defines a receptor as any occupied dwelling used as a primary dwelling or its curtilage, a public or private school, or a place of business. As originally determined during the 1999 rulemaking, the Commission still contends that a "place of business" means the fixed location for the business and the immediate area around the fixed location.

### **Process Wastewater Vessels and Impoundments**

The Commission incorporated the requirement that all new, expanded, or existing anaerobic process wastewater vessels and impoundments constructed or under construction for use in connection with a housed commercial swine feeding operation shall be covered or operated with technologies or practices that are as effective as covers at minimizing odor from the operation. As required by SB 06-114, housed commercial swine feeding operations must submit to the Division information sufficient to demonstrate that the technologies or practices used are as effective as covers at minimizing the odor from the operation. The Commission determined that this information, at a minimum, should include science-based technical information on how odor will be reduced to the greatest extent practicable using olfactometry, scentometry and/or some other method(s) of verification as approved by the Division.

### **Permit to Operate & Modification or Reopening of a Permit to Operate**

The Commission has determined this section of the regulation was not modified pursuant to SB 06-114. Operations are still required to pay a permit-processing fee pursuant to Section 25-7-114.7, C.R.S.

The Commission did, however, revise Sections VI.A.3.c. and VIII.A.4., by removing the outdated fee of \$50.00 per hour for permit processing and odor management plan revisions and referencing the amounts and limitations specified in statute (25-7-114.7, C.R.S.). This revision will keep permit-related fees aligned with statutory changes over time and eliminate the occurrence of these sections becoming outdated and in need of a regulatory revision(s).

### **Specific Odor Control Requirements**

The Commission has determined this section of the regulation was not modified pursuant to SB 06-114, except as described above regarding technologies or practices that must be included in any odor management plan.

### **Testing, Recordkeeping, Monitoring, and Reporting Requirements**

The Commission has determined this section of the regulation was not modified pursuant to SB 06-114.

### **Enforcement**

The Commission added a new section on enforcement to the regulation pursuant to SB 06-114. The Commission notes that there is an understanding between the Division and local health agencies to

coordinate the enforcement of the housed commercial swine feeding operation program to the greatest extent feasible in view of resources available to both state and local governments. The Commission does not believe it is necessary or appropriate to attempt to specify the details of this relationship in the regulation. But the Commission believes that such a cooperative effort will strengthen the efficiency and effectiveness of this program. In particular, the Commission encourages the Division to seek local health agency assistance in implementation efforts in the field, such as conducting inspections for purposes of compliance assurance or in response to site-specific complaints.

### **Annual Fee**

The Commission added this as a new section to the regulation. In accordance with SB 06-114, the Division has the authority to assess and collect an annual fee not to exceed seven cents per animal based on the working capacity of the operation as set forth in Section 25-7-138 (5), C.R.S. The Commission included this authority in the regulation by establishing an annual fee based on the working capacity of each housed commercial swine feeding operation covered by a separate permit. The Commission defined working capacity to mean the number of weaned swine that the housed commercial swine feeding operation is capable of housing at one time. The fee will be used to offset the costs of administering Regulation Number 2, Part B, including activities related to enforcement, inspections and complaint response. The Commission believes that imposing the fee based on weaned swine is consistent with the intent of the Colorado General Assembly during consideration and passage of SB 06-114, and comports with the standard agricultural industry practice of accounting for swine for regulatory purposes.

In addition, a fee based on weaned swine allows the Division to be consistent with the way fees are collected for water quality protection under the Water Quality Control Commission's Regulation Number 61, Discharge Permit System Regulations (i.e., sow and unweaned piglets are counted as one animal).

The Commission recognizes in Section XII.C. of Regulation Number 2, Part B., that inspections and complaint response to operations subject to the regulatory requirements of Part B of this regulation must be developed in coordination with the Division and applicable local health departments or other agents of the state as appropriate. Such cooperative agreements will ensure that proper resources and staffing will be available to enforce the requirements of Regulation Number 2, Part B.

### **Environmental Leadership Program**

This section was renumbered from Section XI. to Section XIII. due to the addition of the enforcement and annual fee sections to the regulation.

### **Economic Issues**

The Commission attempted to adopt regulatory requirements that are as economically reasonable as possible, consistent with the specific requirements of SB 06-114.

### **Federal Requirements**

The rule revisions required by Section 25-7-138, C.R.S., are state-only regulations and are not required by the provisions of a federal act, and are, therefore, more stringent than federal requirements. Such rule revisions have not been adopted for inclusion in the Colorado State Implementation Plan.

### **Determinations Required by Section 25-7-110.8, C.R.S.**

Pursuant to Section 25-7-110.8, C.R.S., the Commission hereby determines that the regulations for housed commercial swine feeding operations are based on reasonably available, validated, reviewed, and sound scientific methodologies. Based on evidence in the record, the Commission finds that the rule

shall result in a demonstrable reduction in odor emissions from housed commercial swine feeding operations.

Further, these revisions will include any typographical and grammatical errors throughout the regulation.

## COLORADO AIR QUALITY CONTROL COMMISSION

ADOPTED: December 14, 2006

III. Adopted June 19, 2008

Adoption of changes that address the Commission's 2006 orders associated with the adjudicatory hearing on Kasel Associates Industries, Inc. and that further clarify and revise Regulation Number 2, Part A.

### Background

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Administrative Procedures Act, Section 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

### Basis

On April 6, 2006, and later revised on and April 20, 2006, the Hearing Officer associated with the 2006 Kasel Associates' adjudicatory hearing, issued an order interpreting Regulation Number 2 to provide that the Division has the burden of proof in determining whether a source used "best practical treatment, maintenance, and control currently available... to maintain the lowest possible emission of odorous gases...". The Commission herein intended to clarify and revise Regulation Number 2, Part A to address this and other issues.

### Authority

Sections 25-7-105(1)(b) and 25-7-109, C.R.S. authorize the Commission to adopt emission control regulations, including emission control regulations relating to new stationary sources.

### Purpose

The Metro Wastewater Reclamation District requested confirmation that domestic wastewater treatment facilities are subject to the provisions of Regulation Number 2, Part A. The term "manufacturing process" is used but not defined in Regulation Number 2, Part A. The term is, however, defined in Section I.G. of the Commission's Common Provisions. The Commission expressly confirms that wastewater treatment plants are subject to the terms, conditions and defenses of Regulation Number 2, Part A. The Commission finds that such facilities are, among things, an "operation or treatment involving chemical, industrial, or manufacturing factors," and a "method or form of manufacturing or processing that emits, or affects the emission of air pollutants," as contemplated by the Common Provisions and this Regulation Number 2, Part A.

The Commission approved updates, revisions and clarifications to Regulation Number 2, Part A, intending to amend Paragraph 1.C.1 to make clear that the emission source has the burden of demonstrating that it is utilizing the best practicable control method. Many different agricultural, commercial and industrial sources operate throughout Colorado. These sources generate a wide variety site-specific types of odors. A source of odorous emissions is in the best position to ascertain and demonstrate what it believes is the best practicable control method for that source. A source can meet this burden by conducting an inquiry into applicable odor control options and documenting their basis for selecting and utilizing what the source has determined to be the best practicable treatment, maintenance

and control currently available for its particular needs, taking into account both economic and non-economic factors. The Division may seek to rebut any such demonstration.

The Commission intends to clarify odor regulation exemptions to address pre-existing exemptions (see Sections 25-7-109(2)(d) and (8)(a) C.R.S.) and co-locate them for clarification.

The Commission intends to make specific technical corrections to update the rule language, including 1) removing the reference to an outdated and unnecessary document entitled "Colorado /Department of Health Pasteurized Fluid Milk and Milk Products Regulation" adopted April 18, 1967, 2) replacing the term "intensity" with "detectability," to align language with current odor vocabulary, and 3) removing specific names of Division-approved odor measurement devices and instead defaulting to currently Division-approved devices as allowed for in Regulation Number 2, Part A, Section IV.

Finally, the Commission intends to make General corrections – revisions to correct typographical, grammatical and/or formatting errors.

Regulation Number 2, Part A is a state-only rule and there are no corresponding federal odor requirements. In addition, the direct intent of these amendments is not to reduce air pollution. Accordingly, the applicability of §§ 25-7-110.5(5) and 25-7-110.8, C.R.S. to this rulemaking is not clear. Nonetheless, the Commission provides the following additional statement, consistent with these statutory sections:

- (I) No federal requirements are applicable.
- (II) The rule is based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (III) Evidence in the record supports the finding that the rule shall result in a demonstrable reduction of any air pollution to be addressed by the rule.
- (IV) Evidence in this record supports the finding that the rule shall bring about reductions in risks to human health and the environment or provide other benefits that justify the costs to implement and comply with the rule.
- (V) The rule is the most cost effective, provides the regulated community flexibility, and achieves any necessary reduction in air pollution.
- (VI) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

COLORADO AIR QUALITY CONTROL COMMISSION

ADOPTED: June 19, 2008